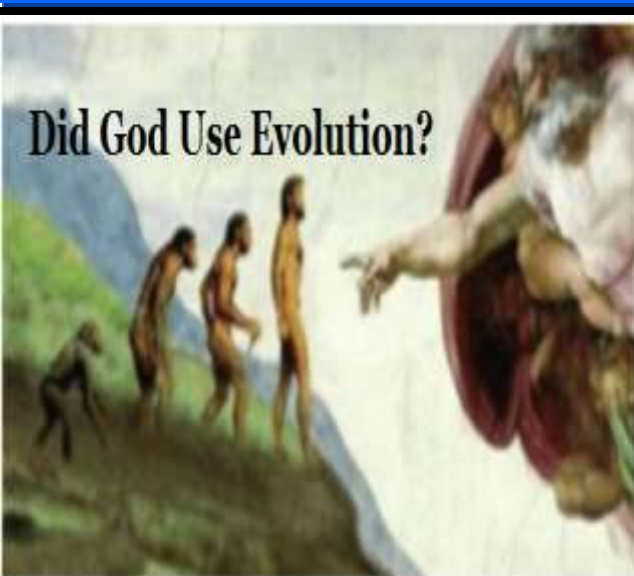


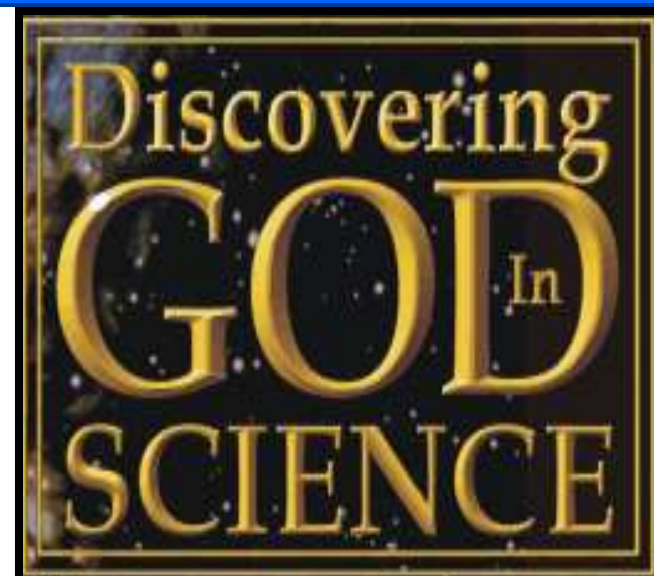


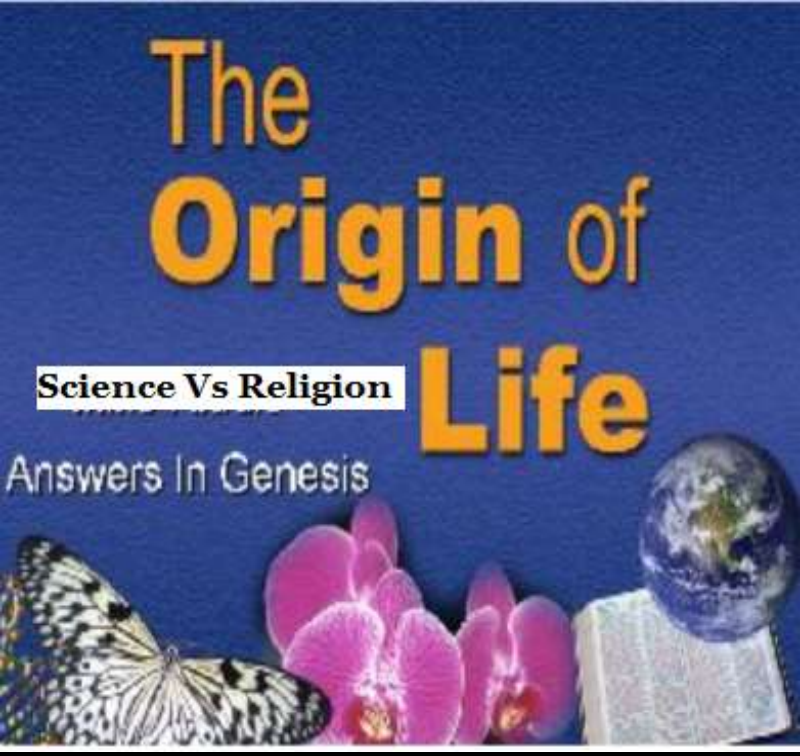
# The Origin of Life on Earth

## Is Evolution compatible with the Bible?....



Presented by  
Rev. D. David  
Lesson: 16



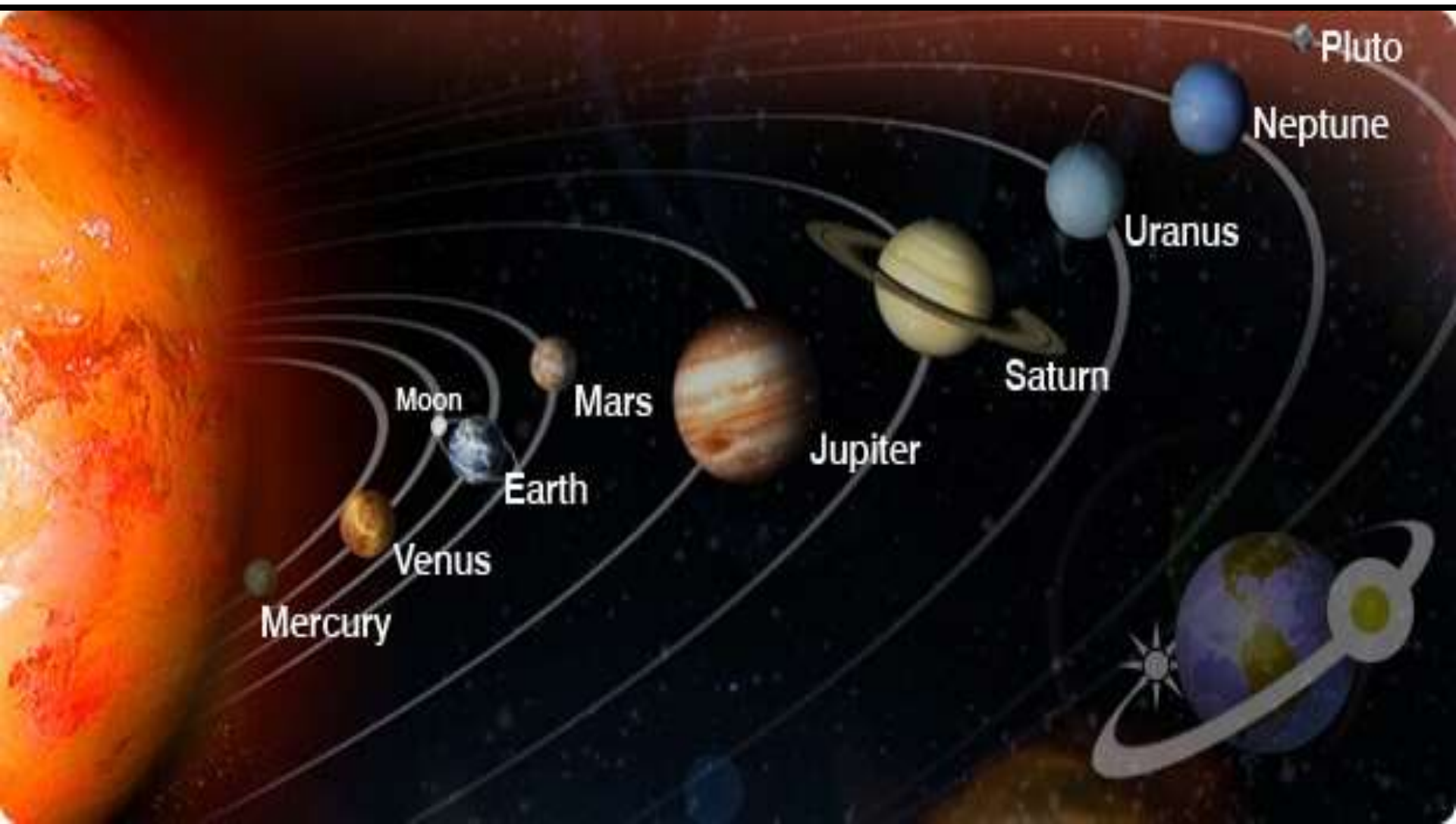


## Why do we need to study Science & Religion.

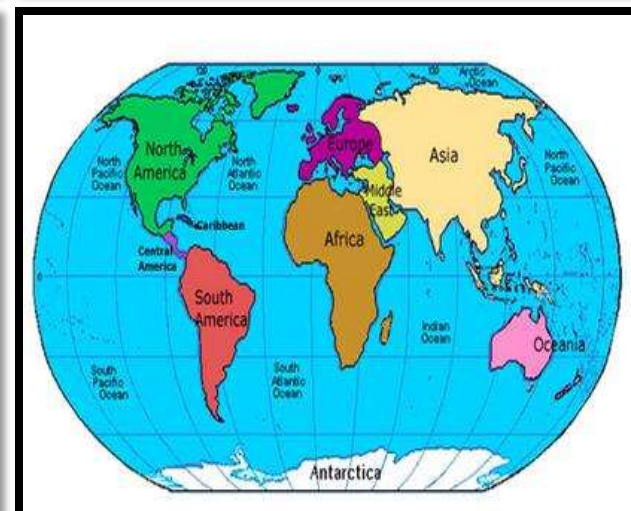
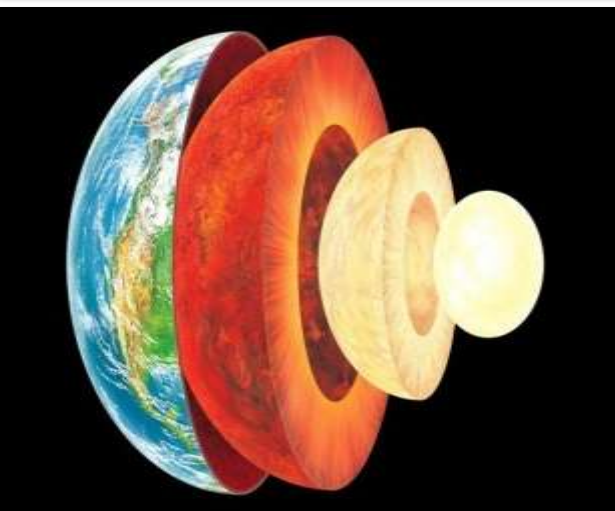
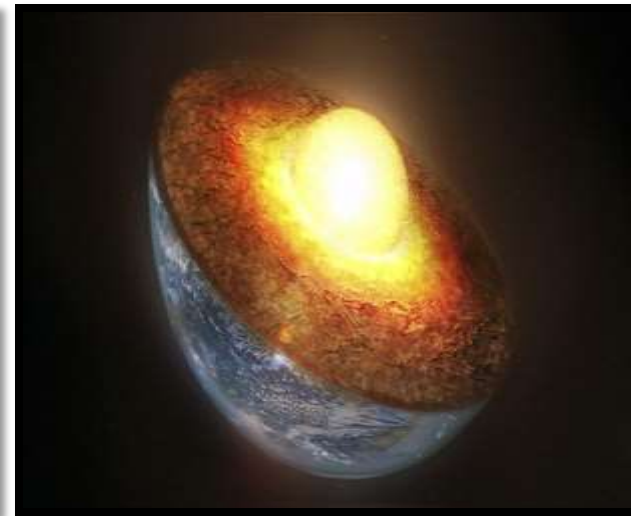
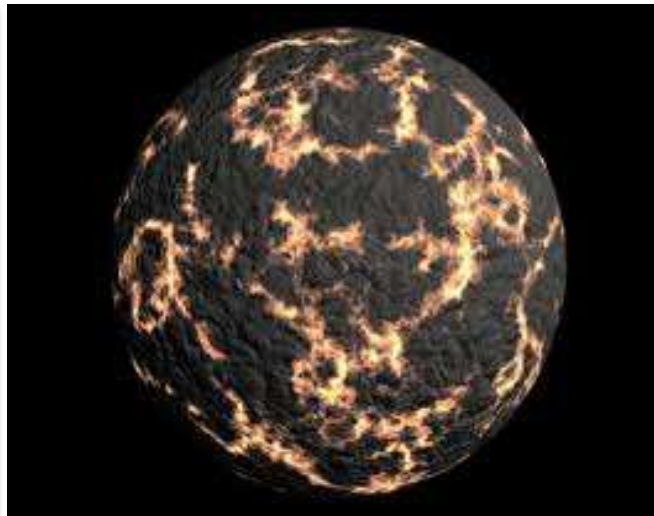
- Question: The Scientists are investigating the questions that Where did life come from? When did it begin? How did the first living things look? What is required for life to begin? How did life arise on Earth? How life is existing? What is the purpose of life?
- Science is a gift from God. He gave it to us so we can know more about Him- **Joe Francis.**
- Science can purify religion from error and superstition. Religion can purify science from idolatry and false absolutes- **Pope John Paul.**
- A scientific discovery is also a religious discovery. There is no conflict between science and religion. Our knowledge of God is made larger with every discovery we make about the world- **Joseph Hooton Taylor.**
- A little science estranges man from God, but much science leads them back to Him- **Louis Pasture.**
- Science without Religion is lame, Religion without Science is blind. The more I study science, the more I believe in God -**Albert Einstein.**
- The religion that is afraid of science dishonors God and commit suicide – **Ralph Emerson.**



**Formation of Solar System:** The formation and evolution of the Solar System began 4.6 bya with the gravitational collapse of a small part of a giant molecular cloud. Most of the collapsing mass collected in the center, forming Sun. The Solar System were nothing but a cloud of cold dust particles swirling through empty space. The Sun is a star. Sun Plus its family of planets(Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, and Neptune) is our solar system. Our Galaxy contains at least 100 billions stars, of which the sun is one.

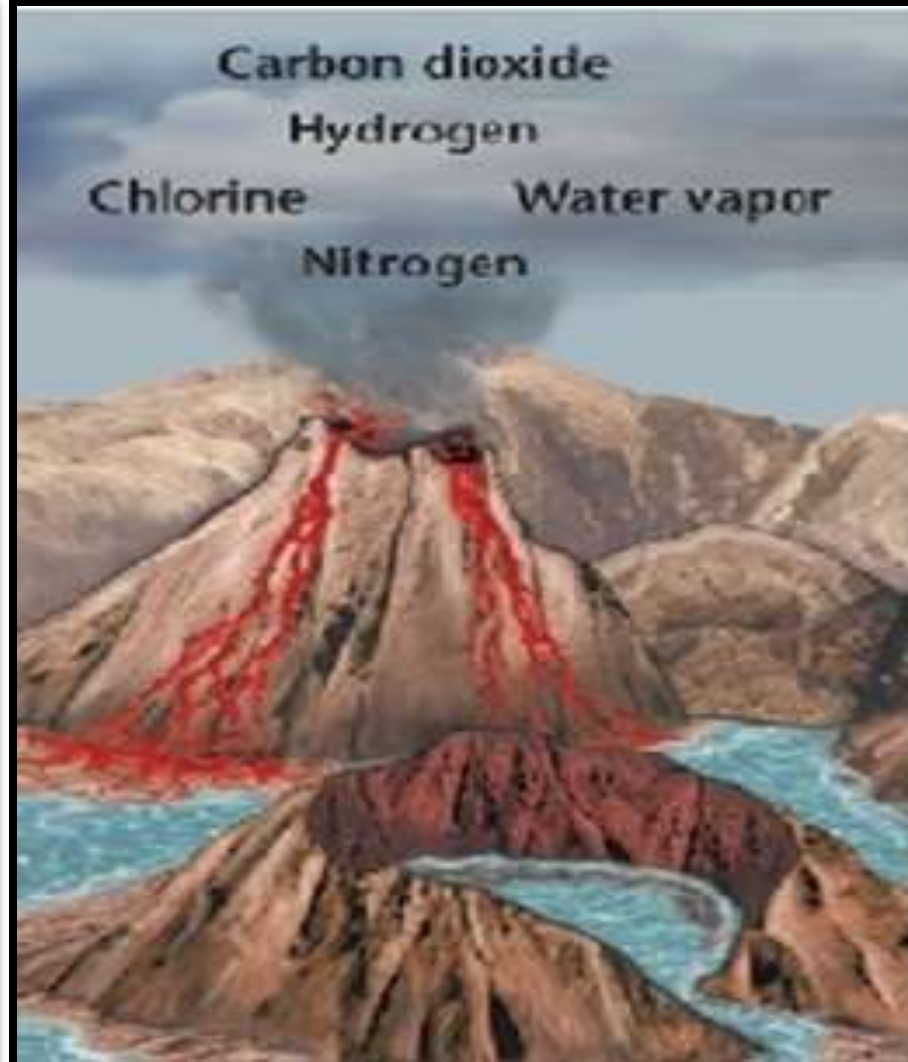
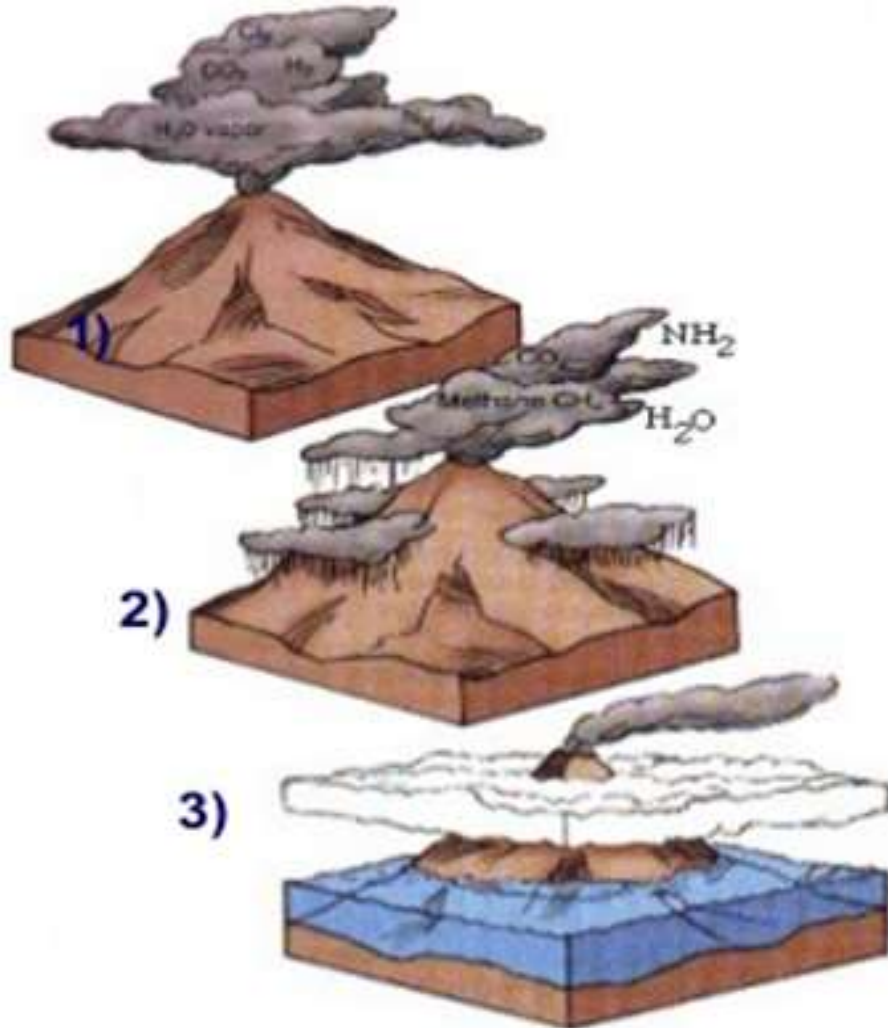


**Formation of Earth.** The earth was formed of material that remained after the formation of the solar system. The Earth was a hot glowing ball of white hot gas. Heavy materials were on the Earth and a liquid material went to the centre Earth formed around **4.5 billion years ago** from the solar nebula. The Earth was a hot glowing ball of white hot gas. **3.8 Billion years ago**, the earth's surface cooled enough for water to exist in liquid form. Heavy materials on the outer core and a liquid material went to the centre. The ocean were born. Earth was ready for life to begin. It supports life as it can maintain water on it's surface.





**Formation of First Ocean.** The first Ocean was formed by **4 billion years ago**. Three Phase History: 1. Initially there was only vapour in atmosphere. Air and ground surface too hot for liquid. 2. cooling of atmosphere led to condensation and rain. Ground surface still too hot . 3. further cooling of ground surface, finally led to the accumulation of liquid water on surface. As Earth's crust cooled, the water vapour gradually condensed into oceans. The forces of gravity prevented the water from leaving the planet.



# The Four Major Geological Eras of Earth:

Era	Period	Millions of years ago
Cenozoic	Quaternary	1.6
	Tertiary	66.4
Mesozoic	Cretaceous	144
	Jurassic	208
	Triassic	245
Paleozoic	Permian	286
	Carboniferous	320
		360
	Devonian	408
	Silurian	438
	Ordovician	508
	Cambrian	570

- Era: Geologists have subdivided Earth's history into eras. It is a period of time in history, starting at one date and ending on another. It is based on the kinds of living organisms that existed during four very large chunks of time.

**Precambrian Era**: In Greek it means It is the "Age of first Life". From **4.6 bya to 545 mya**. It is the time between the beginning of Earth and the appearance of the first complex forms of life. It ended with the great extinctions, which **90%** of the species living in the ocean disappeared.

**Paleozoic Era**: In Greek it means "Ancient Life". **545 mya to 245 mya**. It is known as the "Age of Fish". The early period was the age of the Invertebrates and the last period was the age of the Plants. Life moved from Ocean to land. **90%** of Ocean life and **78%** of land life died by mass extinction. Reptiles and Amphibians survived.

**Mesozoic Era**: In Greek it means "Middle Life". From **245 mya to 66 mya**. It is the "Age of Reptiles". Drifting of Continents from the break up of Pangaea. It is the time of the dinosaurs. It end signified by mass extinction. All of the dinosaurs and half of the other animals and plants went extinct.

**Cenozoic Era**: In Greek it means "Recent life". From **66 mya to present**. It is the "Age of Mammals". Mammals became the dominate form of animal life. Homo sapiens emerged **100.000 yrs** before present.

## How Did Life Begin?



## Theories of Origin of Life on Earth.

- **Divine Creation theory:** God created this universe, plants, animals and human beings in about six natural days. This theory believes that the things have not undergone any significant change since their creation (Gen 1: 20-27).
- **Spontaneous Generation Theory:** It holds that living organisms are generated by decaying organic substances. Eg: Mice spontaneously appear in stored grain or maggots spontaneously appear in meat. The plant lice arise from the dew which falls on plants. Fleas are developed from putrid matter. Mice come from dirty hay.
- **Cosmozic (Panspermia) Theory:** It suggests that life was brought to the earth via mechanisms that include the deflection of interstellar dust by solar radiation pressure and extremophile microorganisms traveling through space within an asteroid, meteorite or comet. It simply moves the origin of life elsewhere in the universe.
- **Physical-Chemical Theory:** It is based on the bonding of chemical substances through nature's physical processes. Life came from a series of chemical reactions and physical changes. This is the best-accepted theory, regarding the origin of life. It is scientifically proven but none of these theories is 100% correct. Research is still going on to unravel the mystery of Origin of life.

Creationism

Spontaneous generation

Theories on the origin of life

Panspermia

Physical-chemical theory



**Divine Creation theory:** Creationism is the religious belief that the universe and life originated "from specific acts of Divine Creation as opposed to the Scientific conclusion that they came about through natural processes. The first form of life was created by a Super natural Being called God. All the different forms of life that occur today on planet earth; created by super natural power. It is purely a religious concept, acceptable only on the basis of faith. Literal creationists base their beliefs on a fundamentalist reading of religious texts, including the creation story found in Genesis that God created the universe and life in six days.

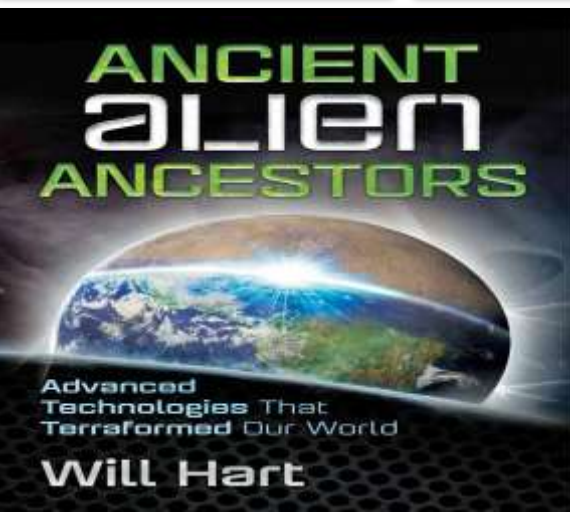
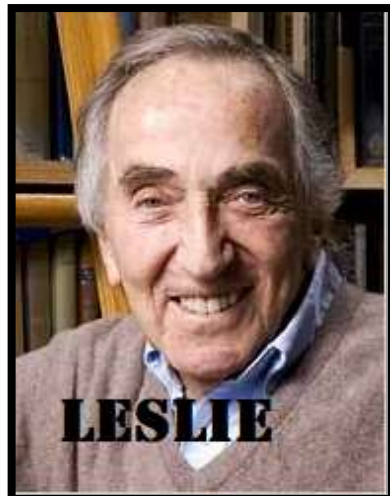
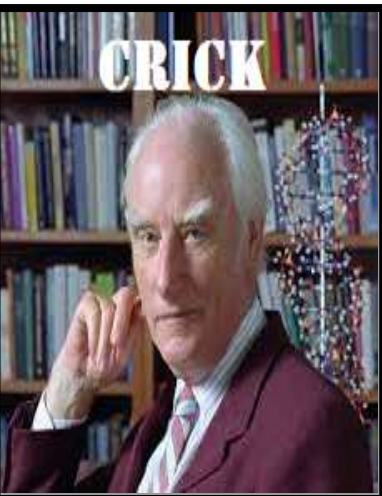




**Spontaneous Generation Theory:** The Greek Philosopher, **Aristotle** (384–322 BC) proposed this theory. It is the idea that **life arises from non-life**. He argued that decaying meat produced maggots and air provided a vital life force that could produce life from nonliving substances. This idea prevailed for thousands of years. He was opposed by an Italian physician **Francisco Redi** (1621–1697). He proved that life could arise only from pre-existing living things. The meat in the open flasks was full of maggots. Flies were entering and leaving the flask. Even after many days no worm appeared in the closed and sealed flask. So this experiment confirmed that new life can come only from early life.

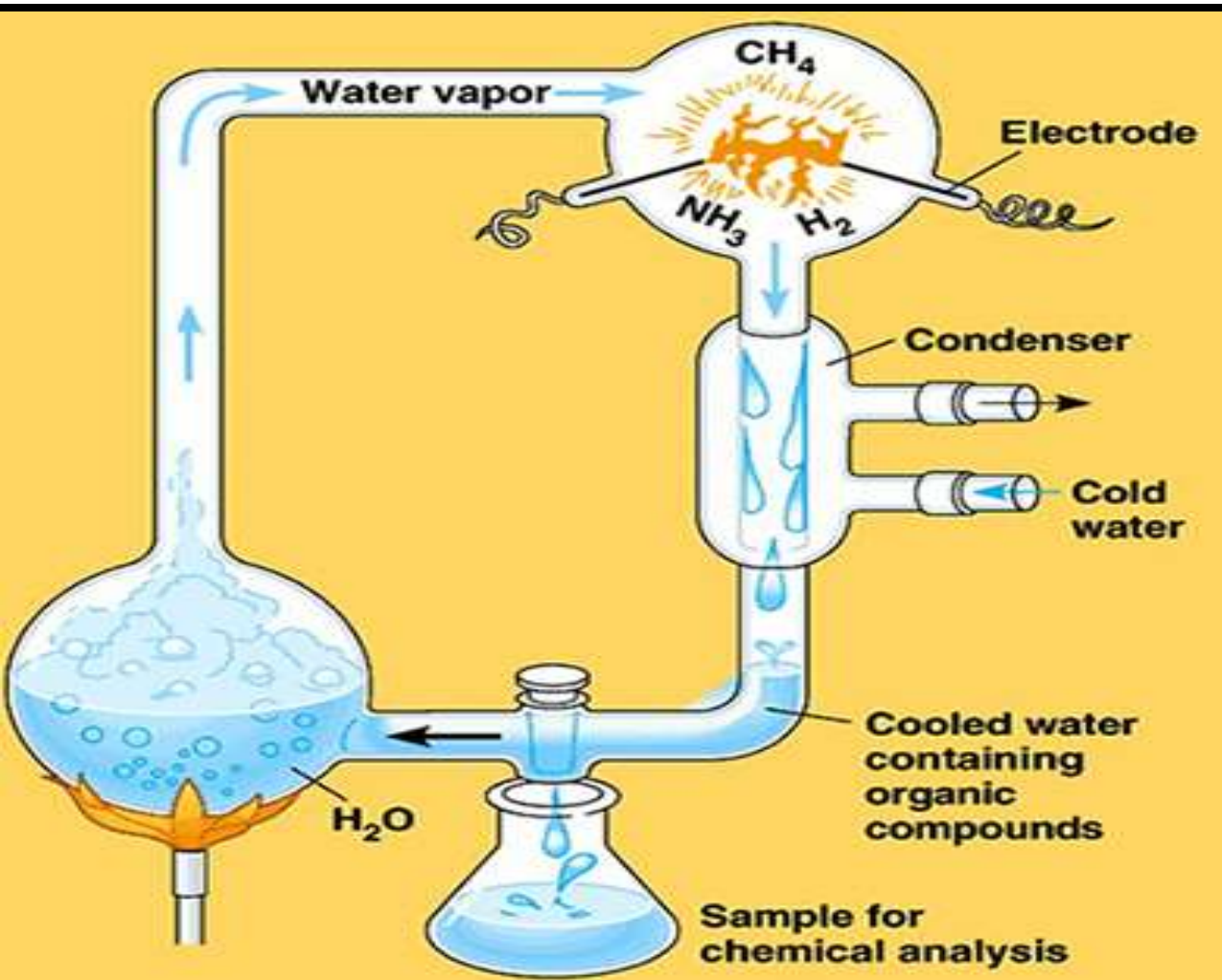


**Panspermia Theory:** This theory proposed by Nobel prize winner **Francis Crick** along with British chemist **Orgel** in 1973. This meteorite was probably blasted off the surface of the planet Mars about **16 mya** by an impact with an asteroid and travelled through space to the earth. Amino acids have been found in space too. So the earth was seeded with primitive life forms from other planets by an advanced extra-terrestrial civilization. Some evidence that early meteorites may have carried organic matter, formed in outer space. Life exists on earth in habitats similar to those found(or once existed) on Mars, Europa, Titan.

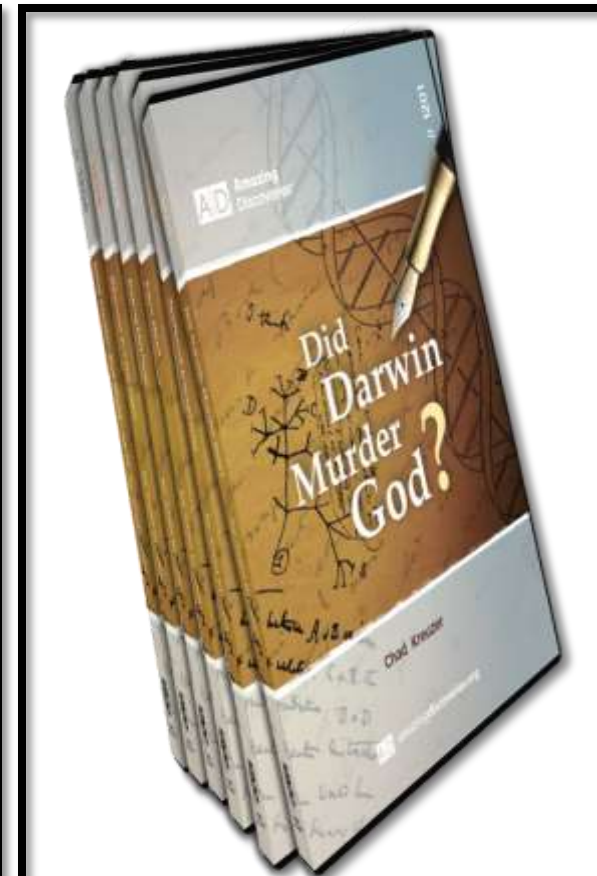
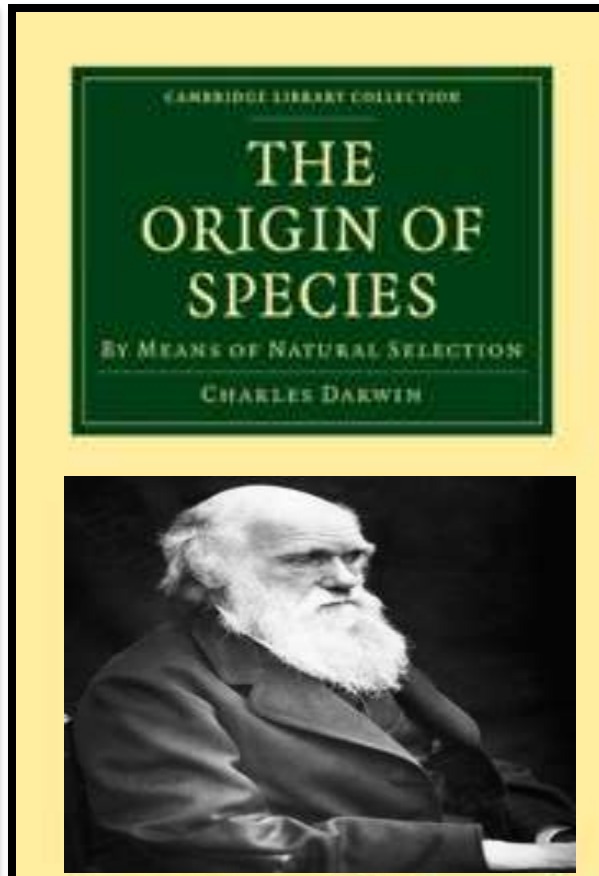




**Physical-Chemical Theory:** In 1953, Stanley Miller and Harold Urey conducted experiments trying to recreate the condition of pre-biotic earth and they succeeded in creating Organic molecules from In-Organic compounds. A mixture of Ammonia, Methane, hydrogen and water vapor was put into a flask and energized by an electrical discharge apparatus to represent ultraviolet radiation. The products were allowed to condense and collect in a lower flask. After a week, they found to contain several types of amino acids together with sugars, and other unidentified organic chemicals. This stimulates the **"Primordial Soup"** on earth from where life arose.

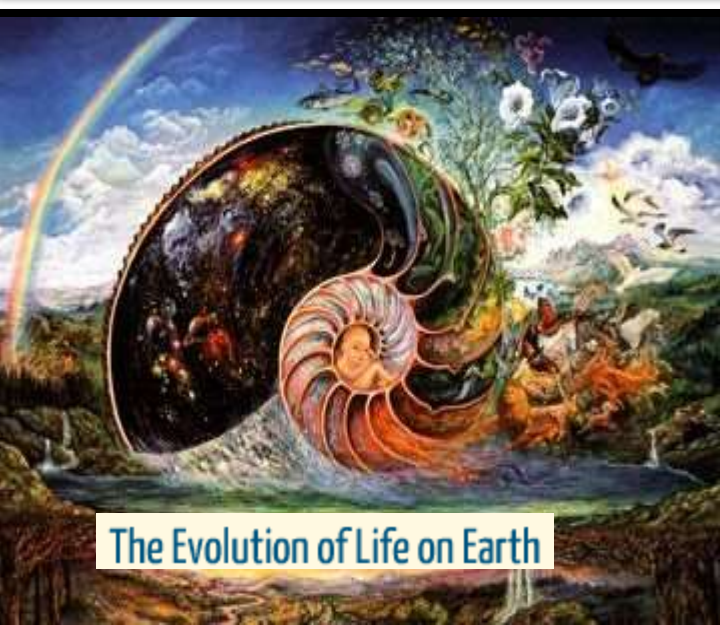
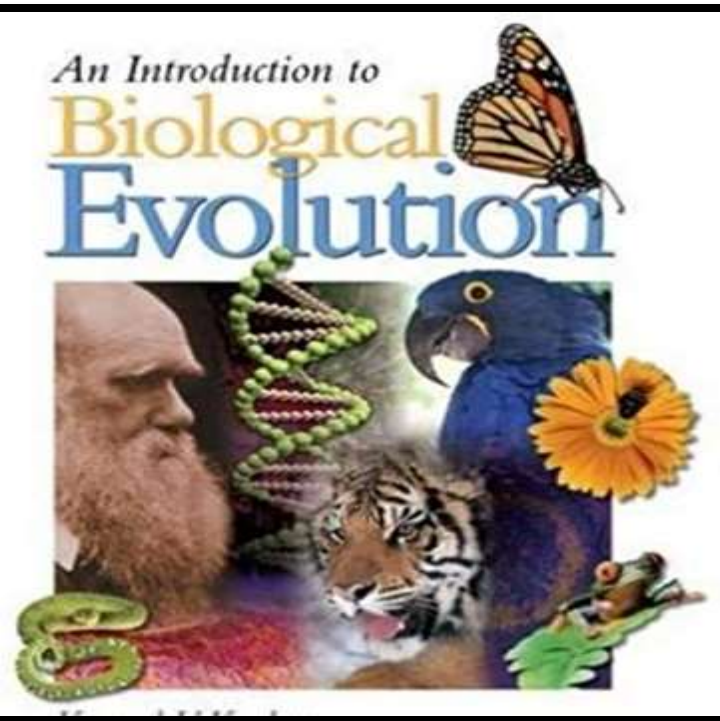


**Biological Evolution Theory (Charles Darwin 1809–1882):** The God Father of Biological Evolution. He was an English naturalist, studied medicine and theology. He had the opportunity to closely observe principles of Botany, Geology and Zoology. In 1859, he published his theory of evolution in **“The Origin of Species”**. In his theory, species that successfully adapted to meet the changing requirements of their natural habitat thrived, while those that failed to evolve and reproduce, became extinct. The species survived through a process called **“Natural Selection”**, and it is a blind process that doesn’t require a creator. Natural selection is a gradual change in a species in response to the demands of its environment. He claimed that all existing creatures descended from a small number of original species from common ancestors.

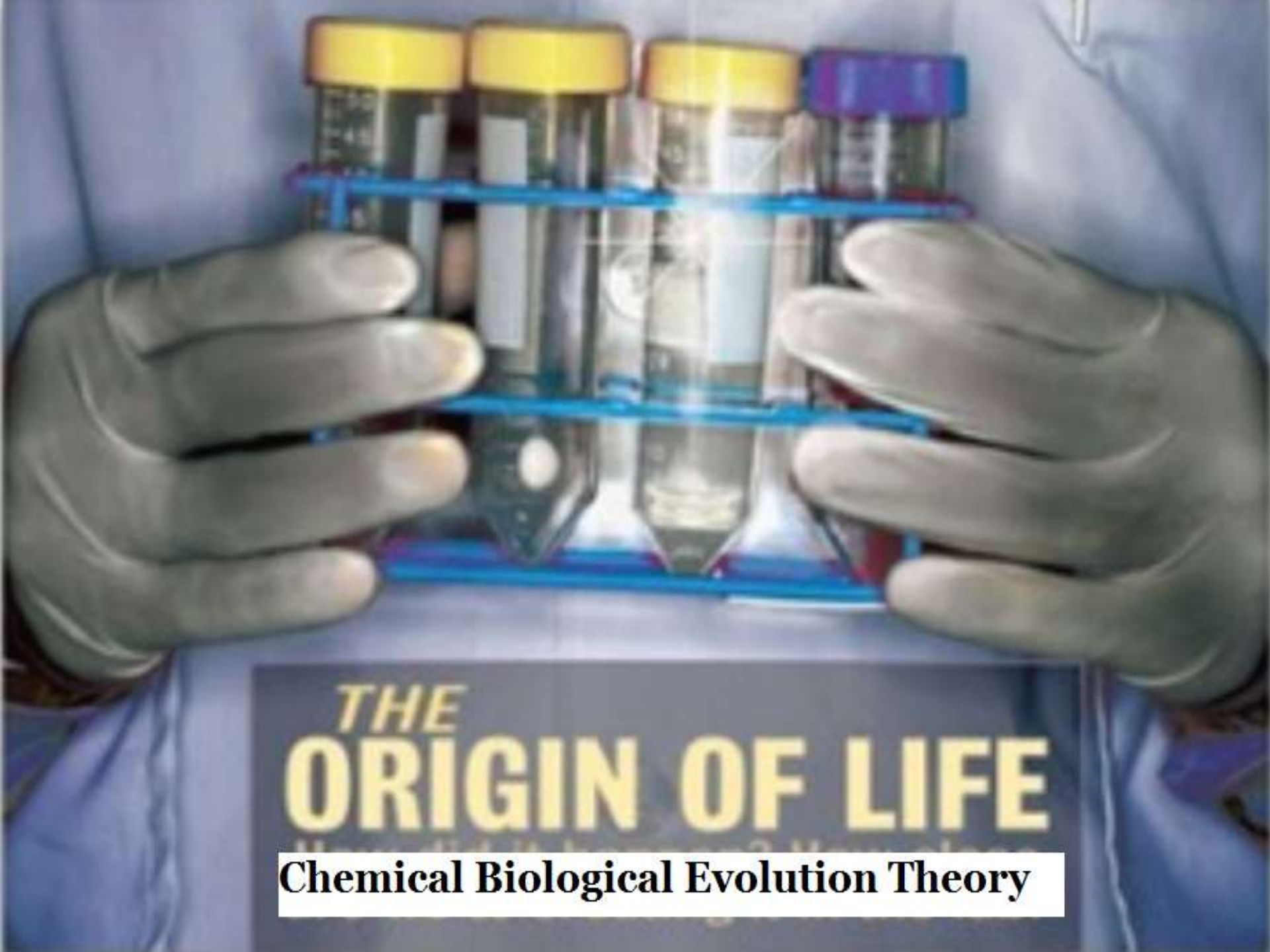




# What is Evolution?



- **Evolution:** Evolution is a continuous process of gradual changes in organisms. It is a process by which organisms adapt to survive, causing a gradual change in a population, ultimately leading to new species evolve. Life developed from simple single celled organisms to more and more complex ones. The best changes survive. It is the process by which modern organisms have descended from ancient organisms. Evolution by natural selection rules out the need for God.
- **Key ideas:** **Struggle for existence** (species compete for food, mates, space, water etc in order to survive) → **Survival of the Fittest** (Individuals that are better suited to their environments survive and reproduce better than those who are not) → **Adaptation** (Inherited characteristic that increases an organisms chance for survival) → **Random mutations** (when something goes wrong in someone's genes and leads to disability or an advantage) → **Natural selection** (the process by which individuals fit, Characteristics most fit for their environment are "selected" to survive and those least fit DO NOT survive) → Sexual reproduction promotes variation → **Descent with modification** (Every living species has descended with changes from other species over time). It implies that all living organisms are related to one another. If we look far enough back, we could find the common ancestor of all living things. Human beings are Star Dusts.

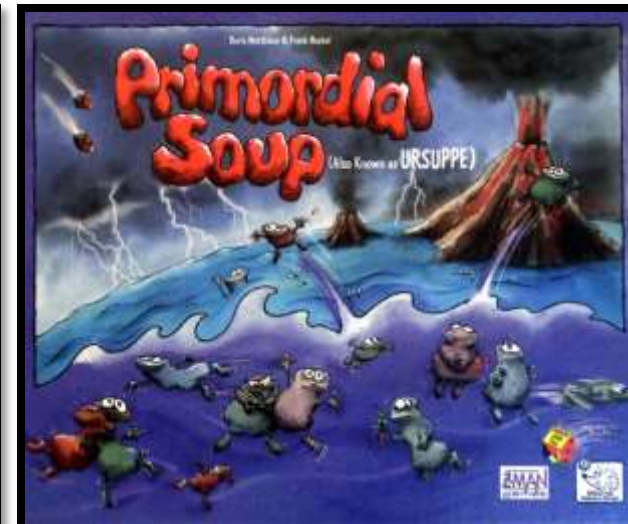
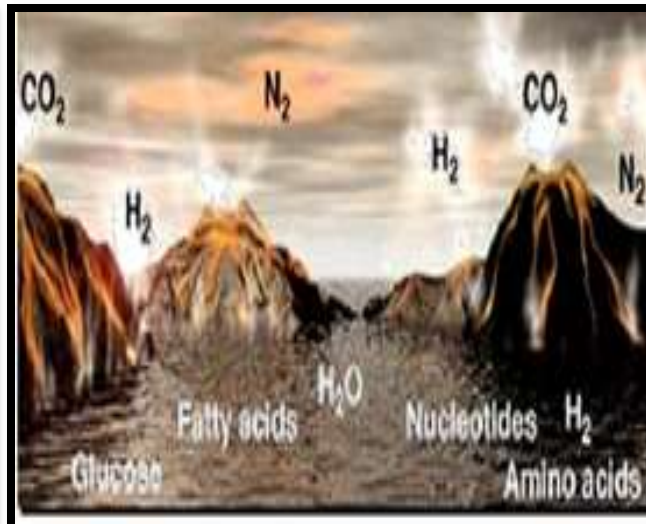
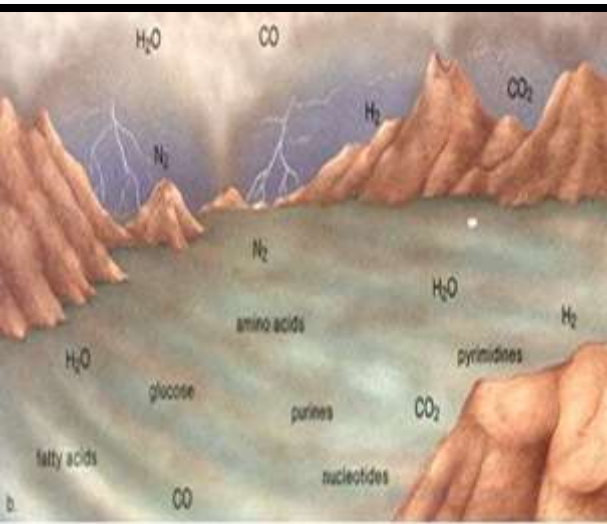
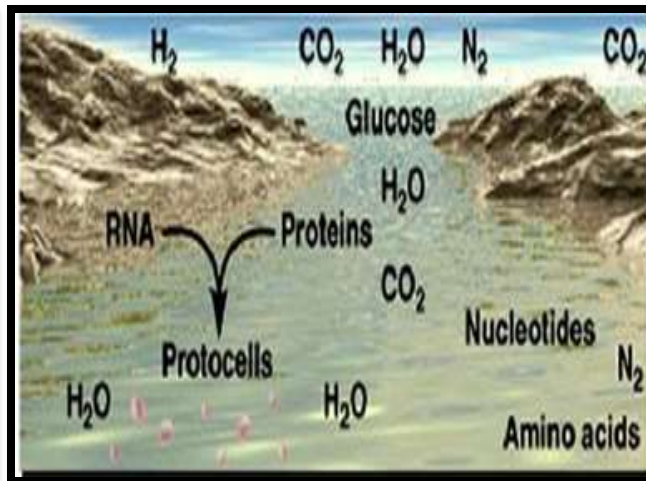
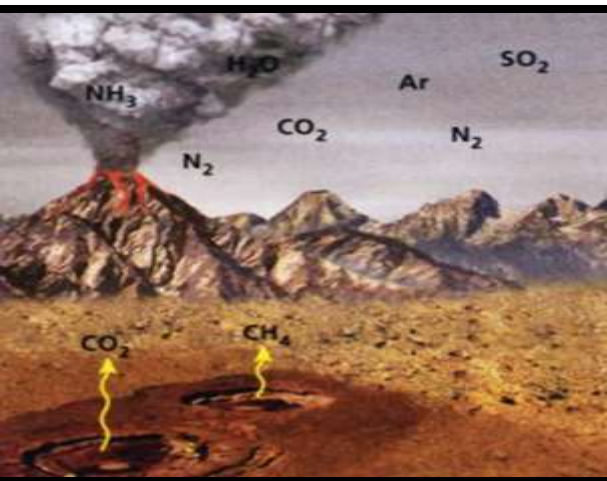


# *THE* **ORIGIN OF LIFE**

**Chemical Biological Evolution Theory**

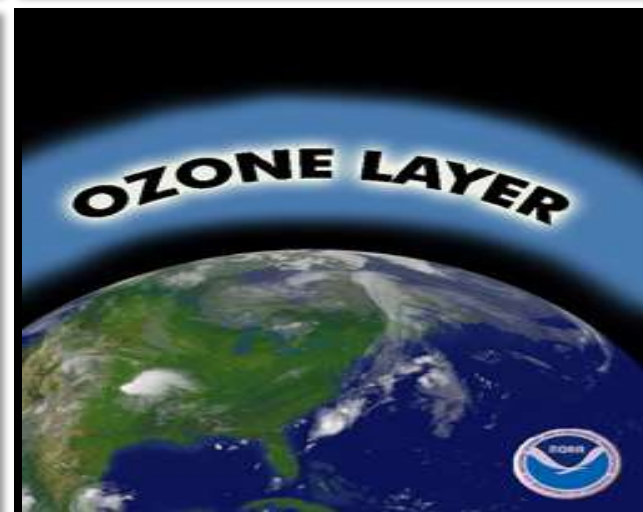
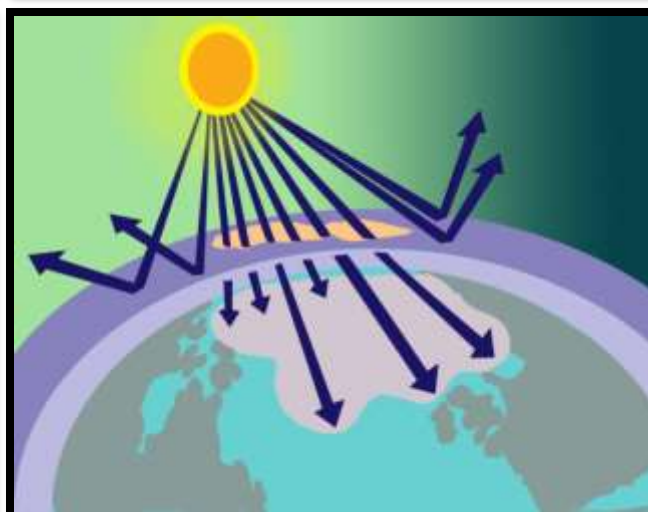
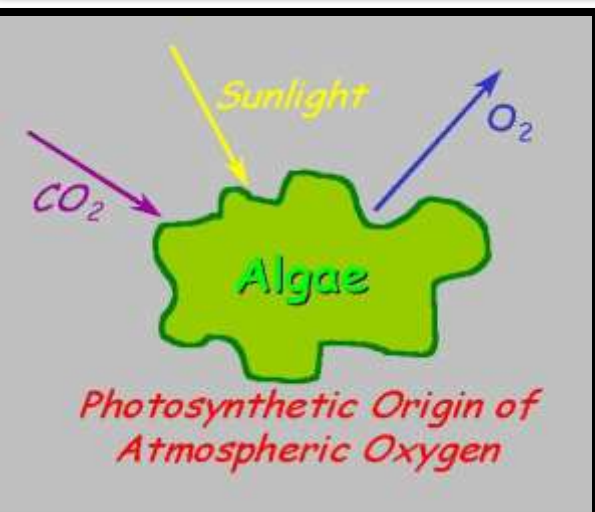
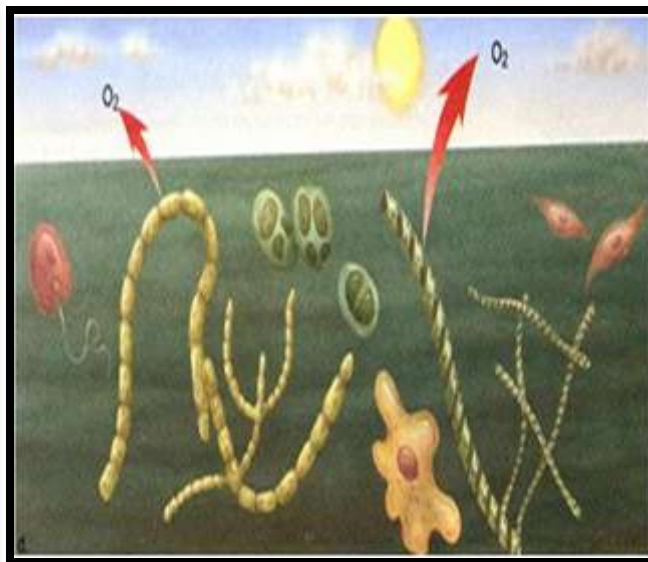
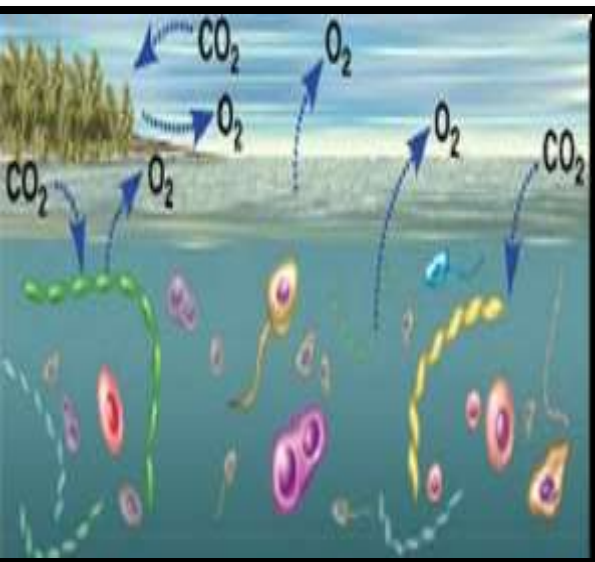


**Evolution of life by Formation Primordial Soup.** Russian Chemist A. I. Oparin and English Geneticist J. B. S. Haldane in 1920 proposed **"Primordial Soup"** theory. Earth's early atmosphere formed as Volcanic eruptions then energized by lightning and the rain from the atmosphere, released Nitrogen, Water Vapour, Ammonia, Methane, Argon, Sulphur Dioxide and Carbon Dioxide. The availability of energy from Volcanic eruption and lightning allowed gases to form simple organic molecules known as **"Primordial Soup"** and it is the basis for the origin of life. Basic Life molecules came from simple In-organic molecules.



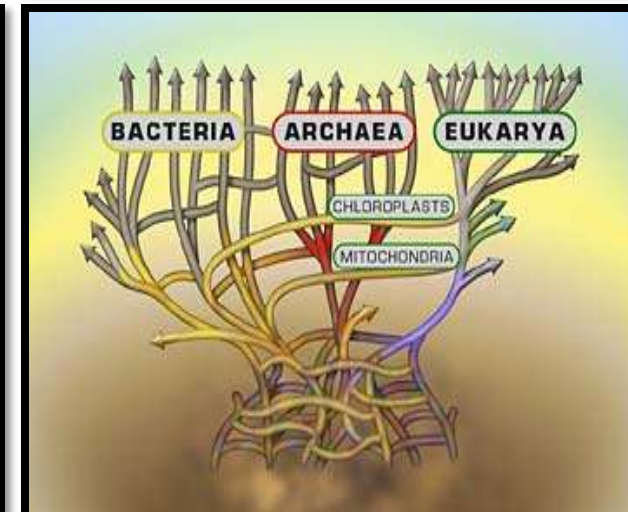
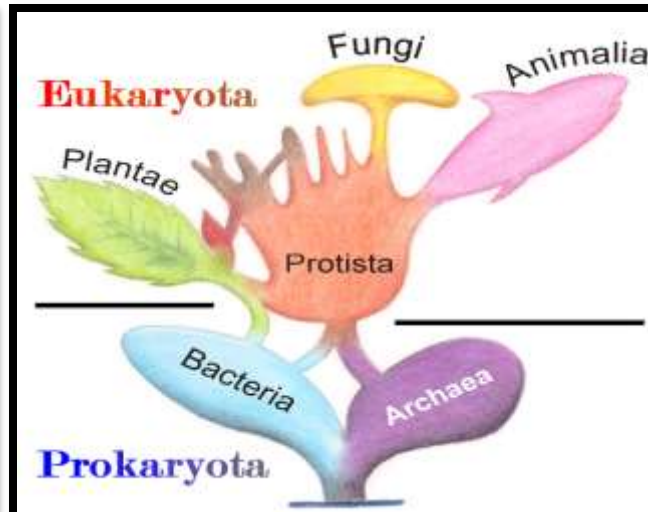
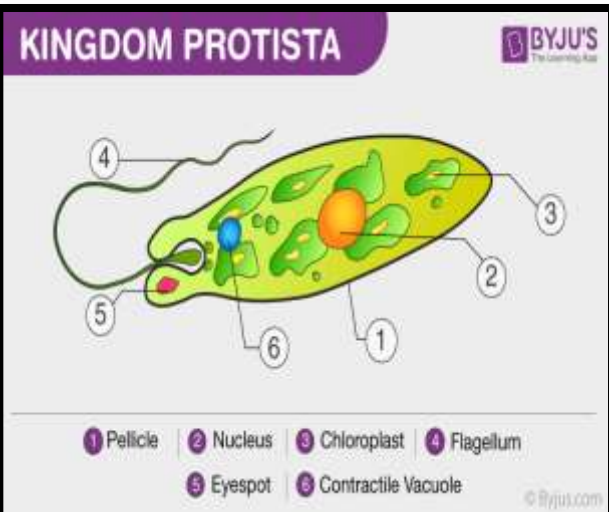
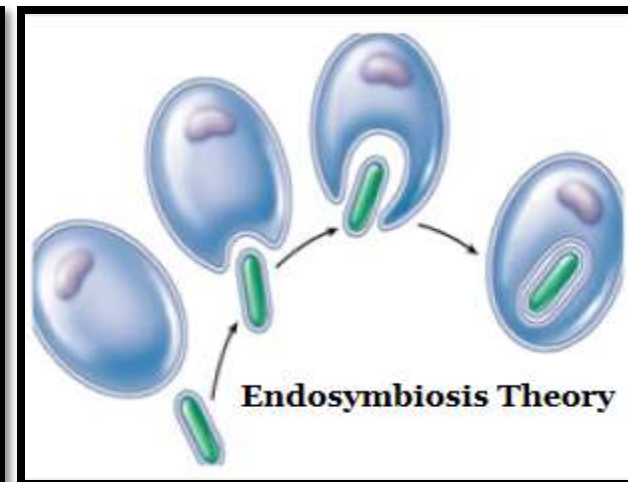
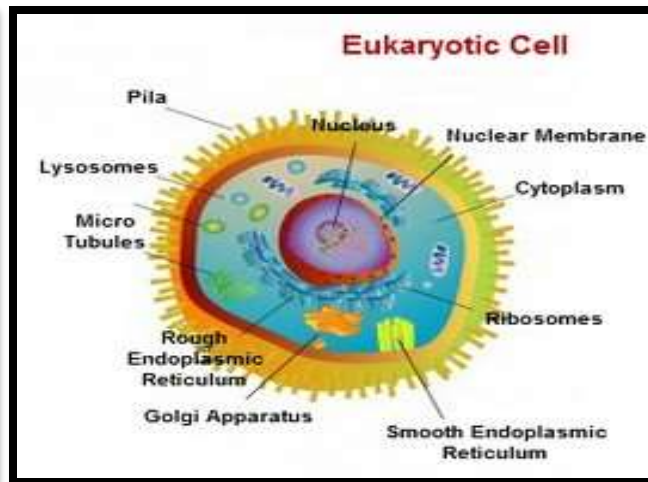
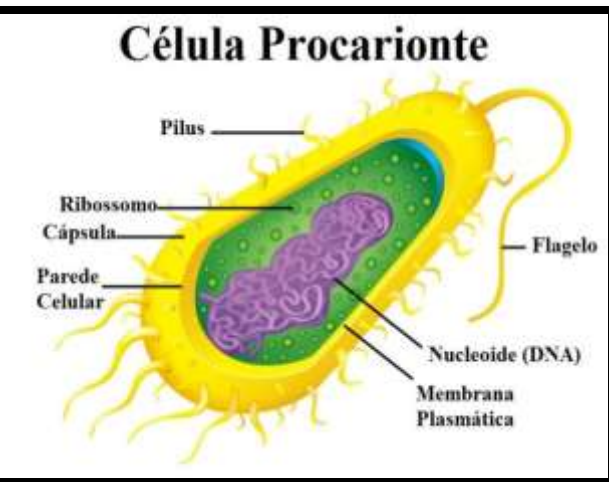


**Formation of oxygen in Atmosphere:** Early earth atmosphere probably contained  $\text{HCN}$ ,  $\text{CO}_2$ ,  $\text{CO}$ ,  $\text{H}_2\text{S}$ . It lacked oxygen, so it could not support life. **About 2.5 bya**, Photosynthesis by Cyano-bacteria or blue-green algae, began adding oxygen to the atmosphere, lakes and Ocean. **About 1.8 bya**, the atmosphere contained abundant free oxygen. Oxygen is not air, there is app 21% oxygen found naturally in the atmosphere. Ozone layer is formed when  $\text{O}_2$  interacts with UV light. Ozone layer blocks UV light and ends a major source of energy for the biotic synthesis of organic molecules.





**Evolution of Prokaryotes / Eukaryotes Cell:** The first cells came into existence in aquatic environment. **Prokaryotes** appeared about 3.5 bya. no nucleus, single loop chromosome with all genes. Bacteria and Achaea are the two main branches of Prokaryote evolution. Without Prokaryotes ecosystems would collapse. **Eukaryotes** single cell appear 2 bya, has a nucleus with a nuclear envelop. Bigger and more complex than Prokaryotes. **Protista** (multi-cellular) appeared 1 bya by asexual and sexual reproduction. The Endo-Symbiosis theory states that Protista evolved from Eukaryotes and Eukaryotes evolved from Prokaryotes, which gave rise to animals, planets, and fungis.



**Evolution of Jawless Fish:** The first primitive of all fish are the jawless fish (*Agnatha*), armored with bony plates about **400 million years ago**. As they lack Jaws, fish must feed by suction with the aid of a round, muscular mouth and rows of teeth. Body is cylindrical and elongated like that of an eel or snake; no paired fins or scales. Two features evolved in fish that set them apart from the early vertebrates: Jaws and Paired fins. The jaws allowed for grasping prey. Fins allowed for fast swimming in pursuit of prey.

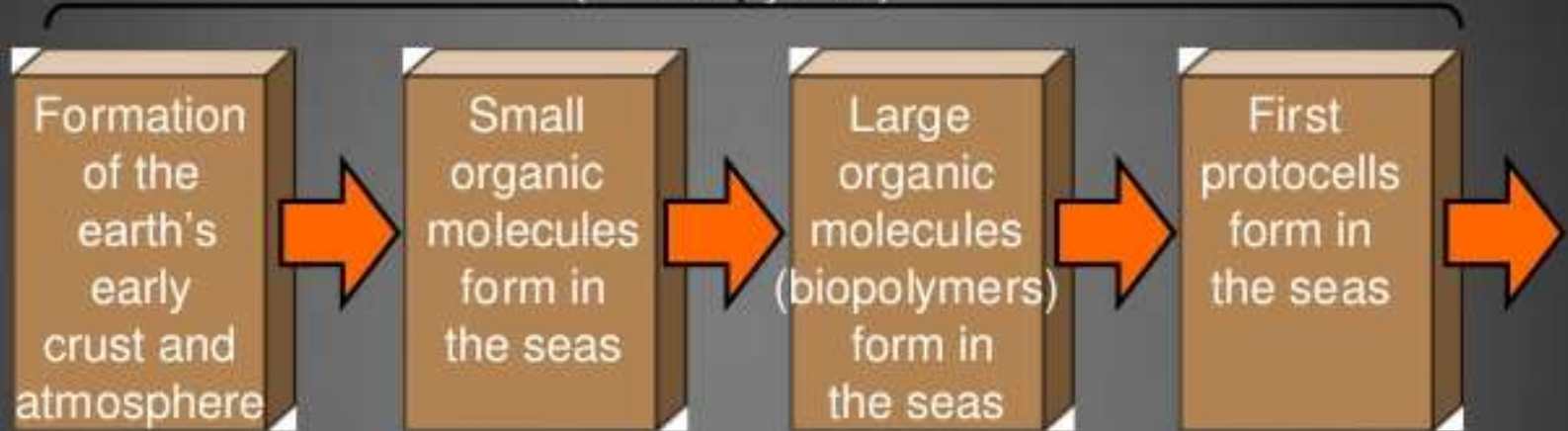




# Summary of Evolution of Life

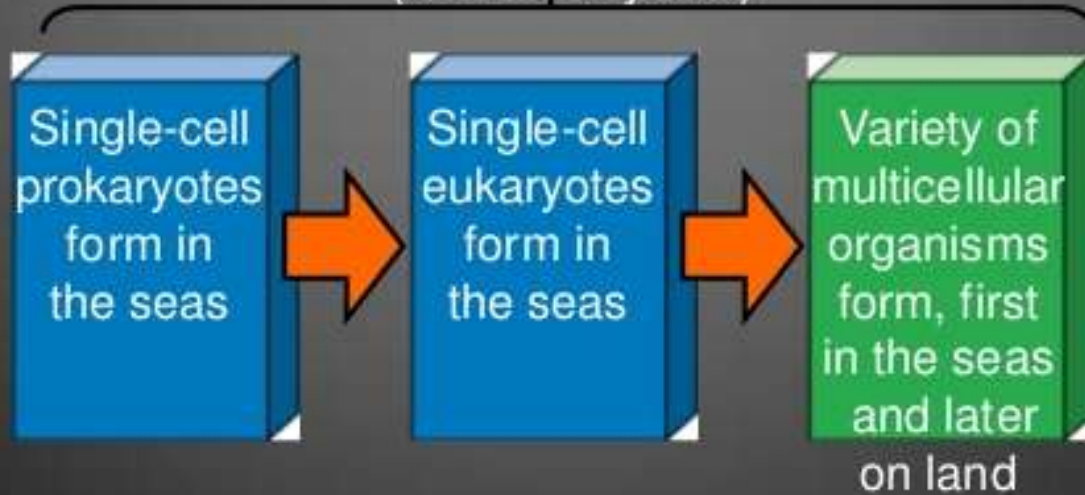
## Chemical Evolution

(1 billion years)

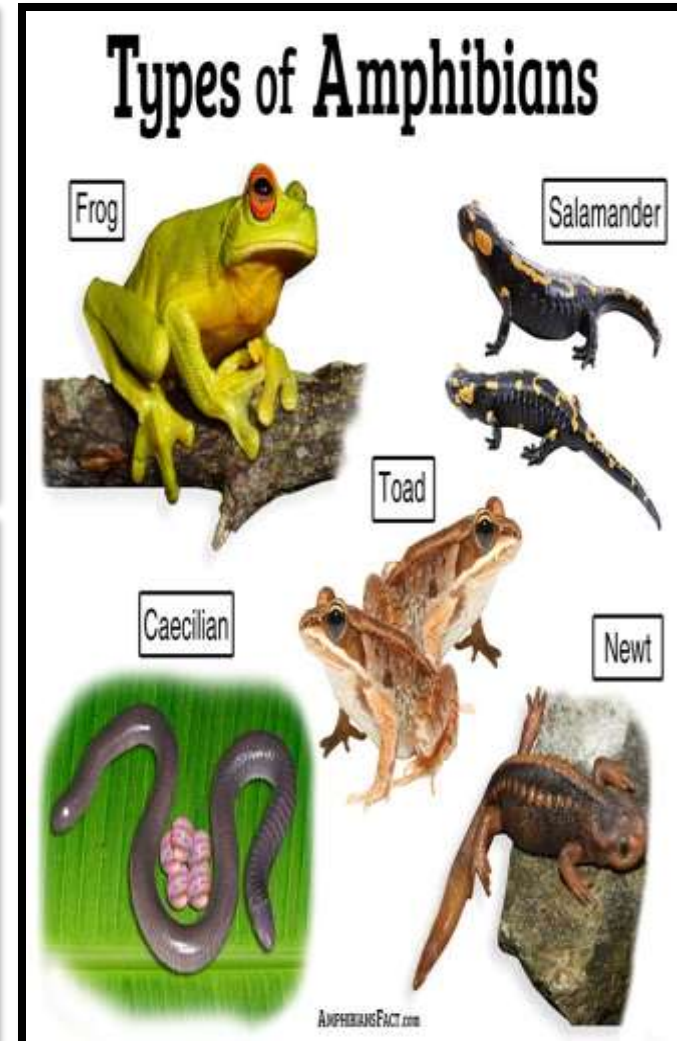
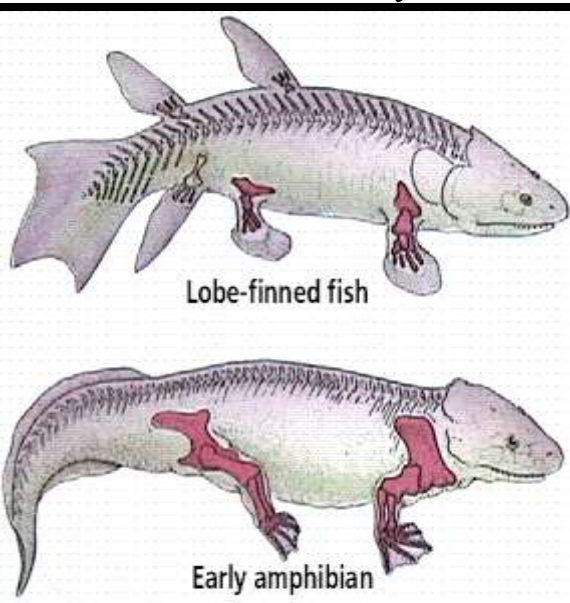


## Biological Evolution

(3.7 billion years)

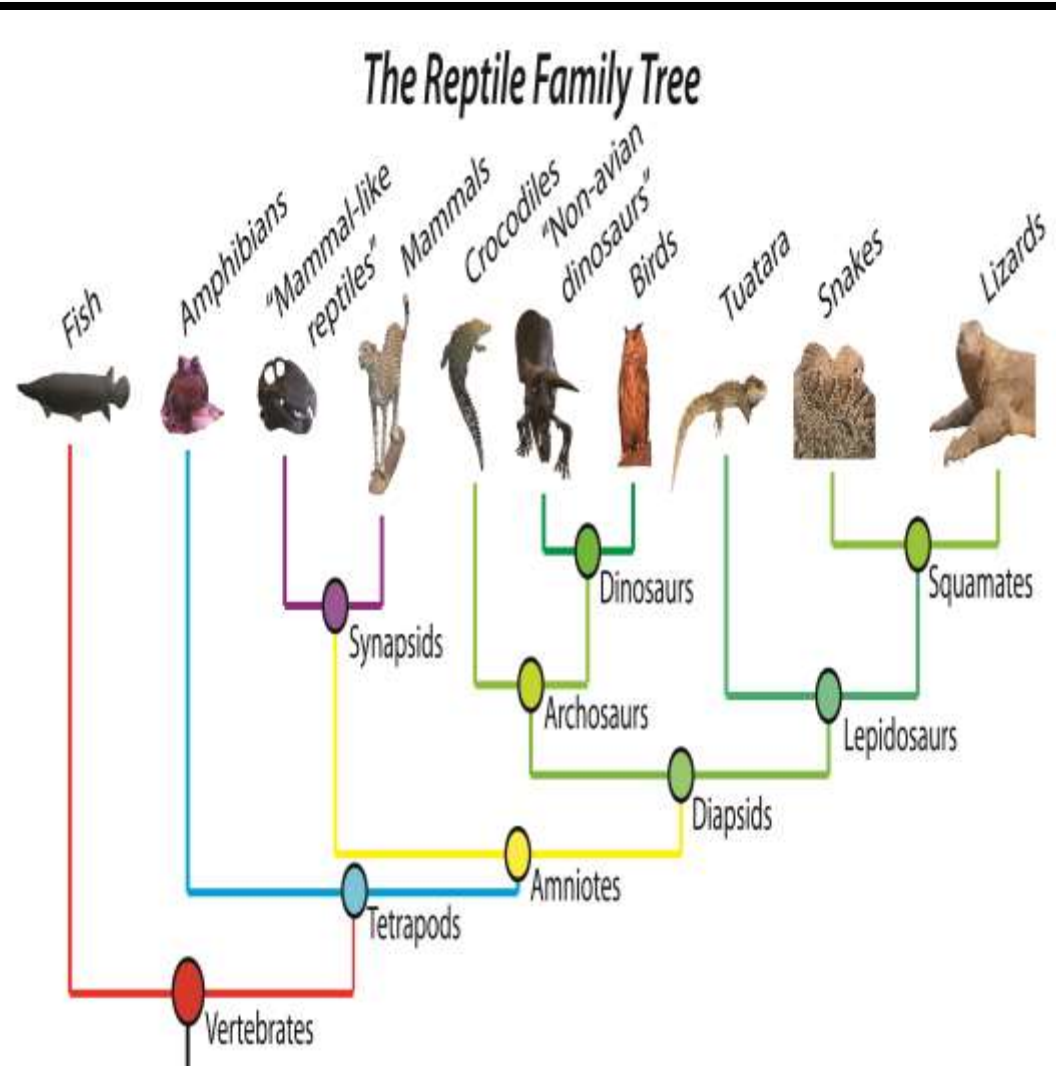


**Evolution of Amphibians:** Amphibians evolved from lobe-finned fishes about 360 mya. Amphibians became the first vertebrates to live on land. Amphibians live part of their life cycle in water and part on land. The larval stage is in water the adult stage is terrestrial. Amphibians evolved several adaptations to land. The larval stage is in water the adult stage is terrestrial. About 340 mya amphibians split into two main evolutionary lines. One line included ancestors or Reptiles, the other line included the ancestors of modern amphibians. Most amphibians became extinct at the end of the Permian Period. Only 3 orders of small amphibians still exist: Frogs and toads, Caecilians.

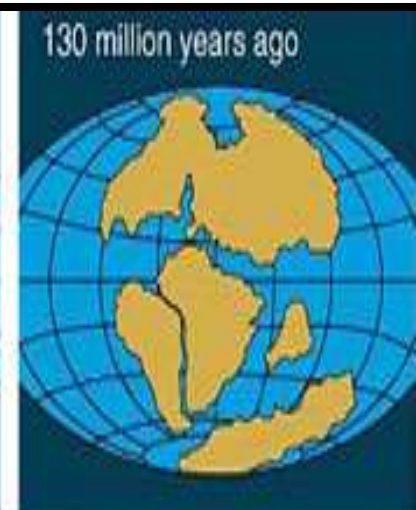
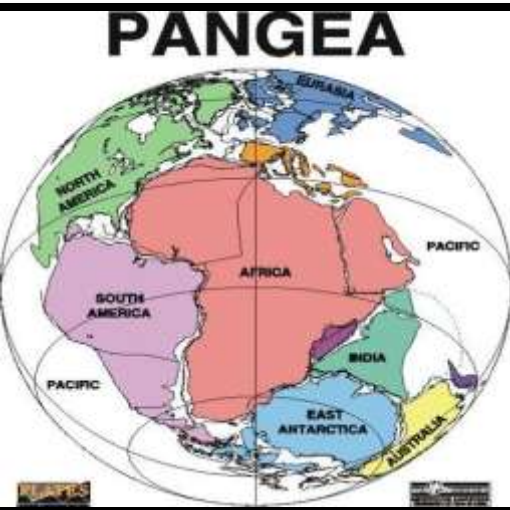




**Evolution of Reptiles:** About 350 mya, Reptiles evolved from amphibian like were the first vertebrates to develop the adaptation to lay eggs on land. Reptiles live on land. Reptiles use lungs to breath. Some reptiles are hatched from eggs, others are born live. Reptiles have evolved into unique forms such as: Turtles, Snakes, and Dinosaurs, Cold blooded, lay eggs on land. but they also have taken on the appearance and habits of other vertebrate groups, such as sharks and dolphins. The first reptiles were small dinosaurs that evolved from amphibians.

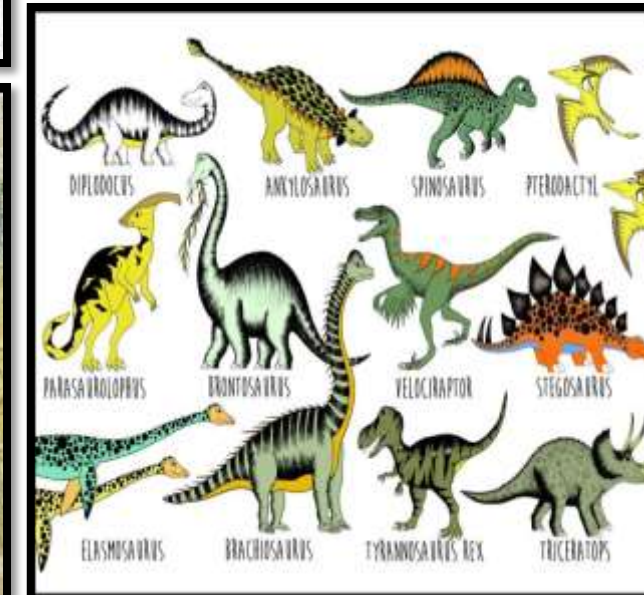


**Pangea and Drifting of Continent:** Scientists believe that about **250 mya** (during Mesozoic Era), a super-continent known as Pangea existed (Gen 1:9). About **200 mya**, Pangea began to break into two continents like **Laurasia** and **Gondwana**. The **Laurasia** drifted northward, rotated, and broke up to form North America and Russia (USSR). **Gondwanaland** also broke into two continents. One broke apart to become Africa and South America. The other separated to form India, Australia and Antarctica.



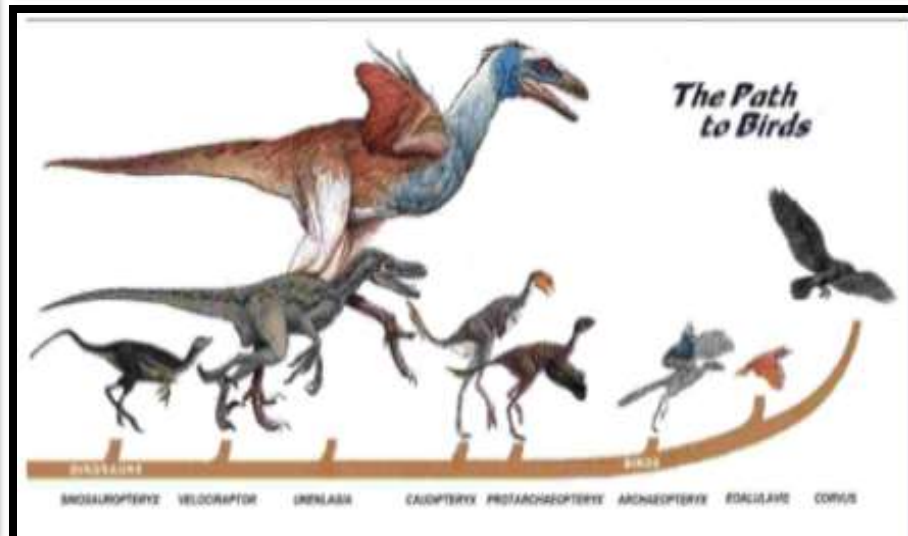
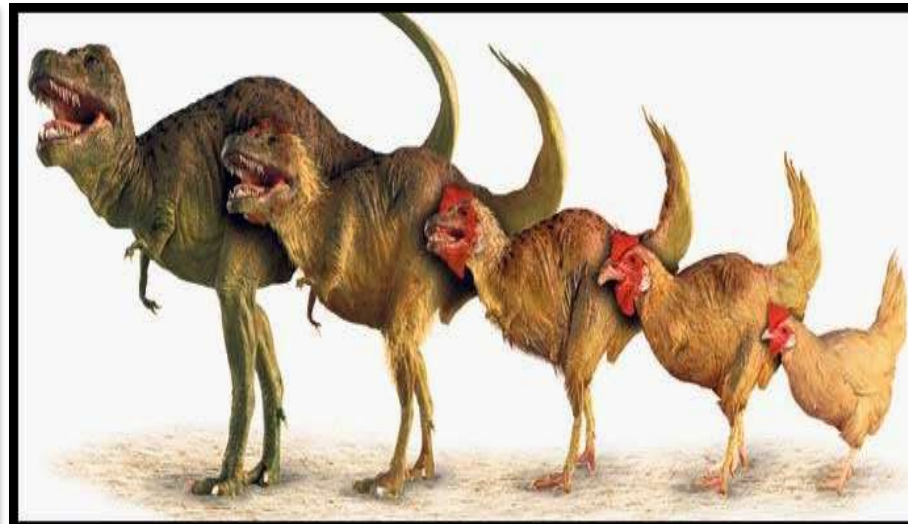
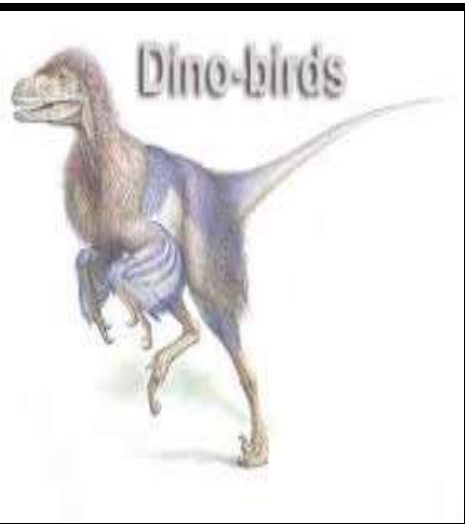


**Evolution of Dinosaurs.** Dinosaurs appeared in the late Triassic, **about 225mya**. The name Dinosaurs comes from the Greek *“deinos”* means **“terrifying”** and *“dauros”* means **“lizard”**. The earliest dinosaurs were small. Many were less than 3 feet long. By the end of the Triassic, dinosaurs were up to 20feet long. They became much larger later in the Jurassic and Cretaceous. Dinosaurs dominated the world for almost **135 million** years. About **65 mya**, Dinosaurs became extinct .



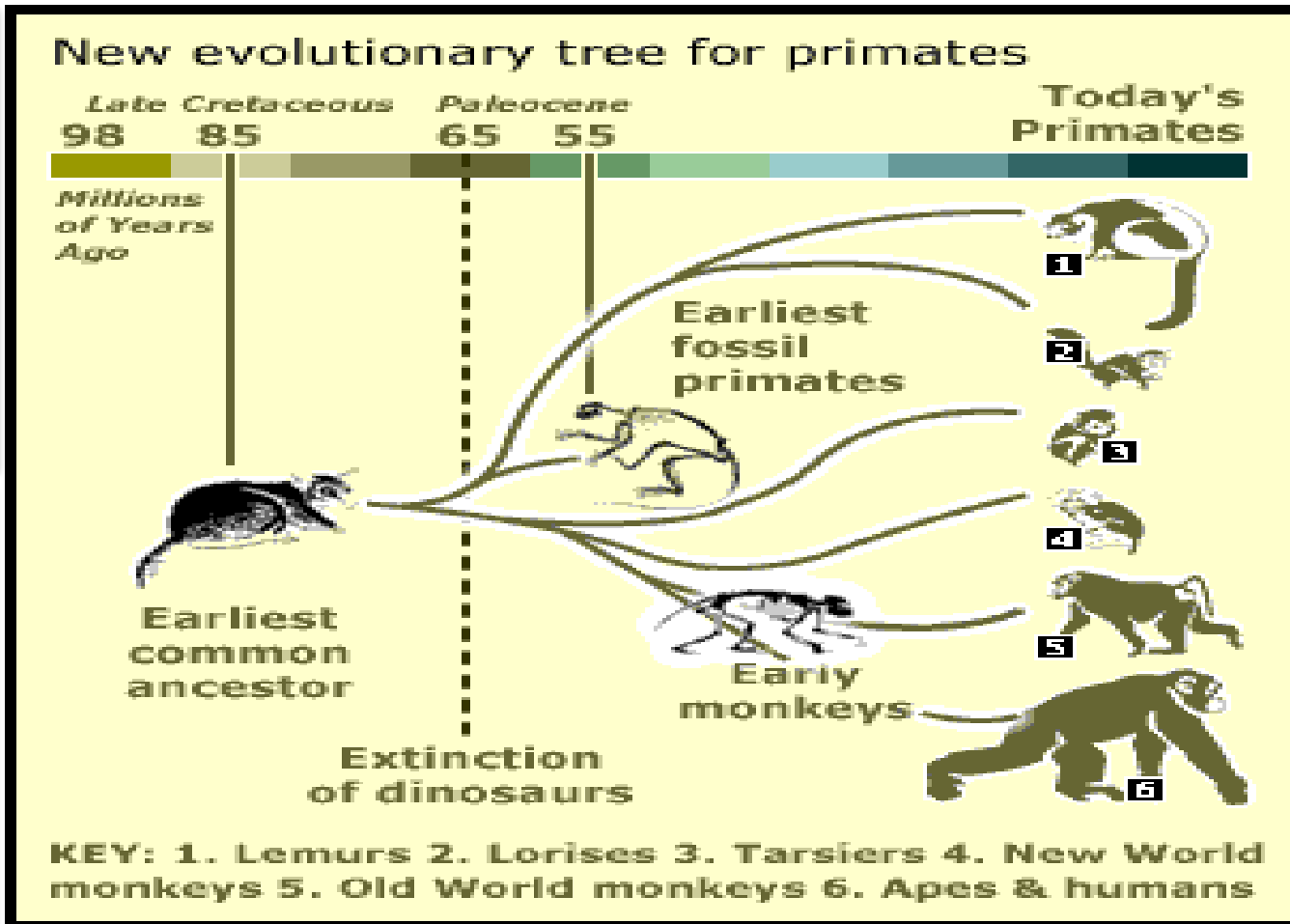


**Evolution of Birds:** Birds began as feathered reptiles both evolved from an earlier ancestor. The origin of flying reptiles around **215 mya**. Scientists theorize that birds evolve from the same line as crocodiles and Dinosaurs around **150 mya**. And they are Warm blooded, feathers, and lay eggs. Bird like feathers are found in some dinosaurs. Birds probably appeared near the end of the Jurassic. In addition to amniotic eggs and scales modern birds have feathers and other distinctive flight equipment that help them survive.





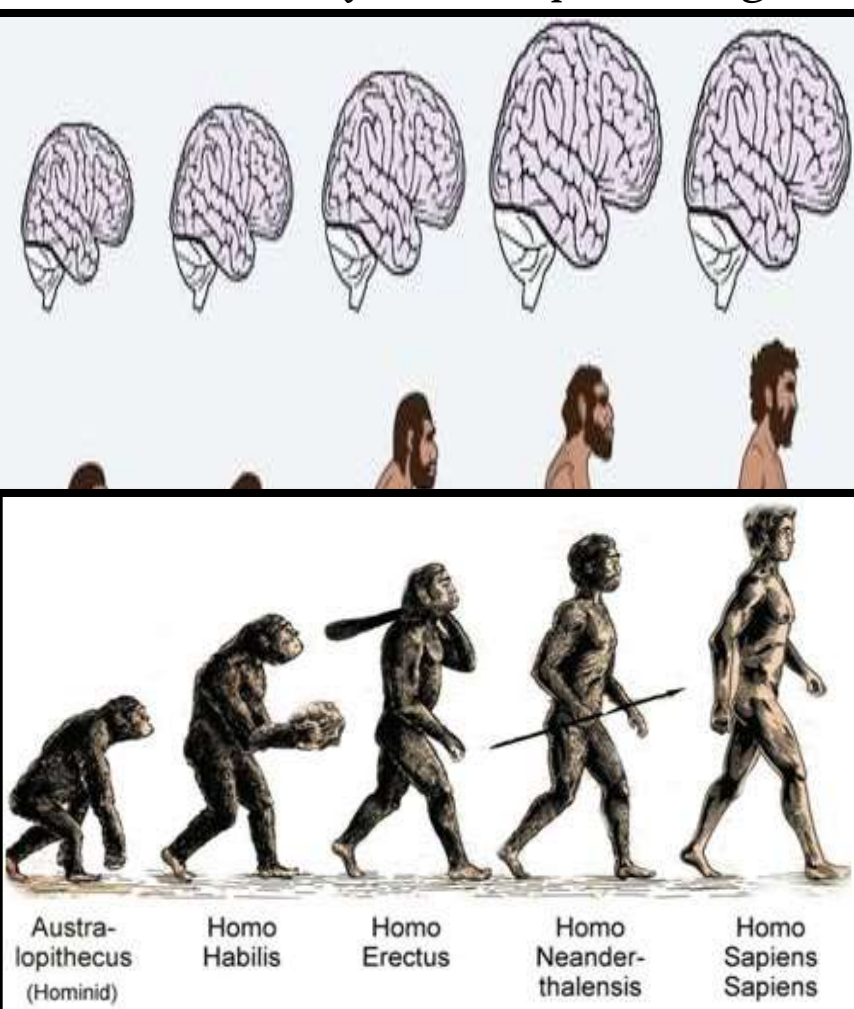
**Evolution of Mammals:** Therapsids, the initial ancestors of mammals, appeared about **250 mya**. Dinosaurs dominated the world for **135 million years**. The early mammals usually moved at night for better survival, staying hidden during daylight hours to escape the attention of the Dinosaurs, about **65 mya**, when most of the Dinosaurs perished. The Evolution to mammals began in the Cenozoic era, various mammals emerged and evolved rapidly. It was then **the first whales** appeared in the sea, and since all the current mammal groups had appeared by **40mya**. Over several periods, mammals changed in shape, habits, and distribution until and there were mammals living almost everywhere in the world.



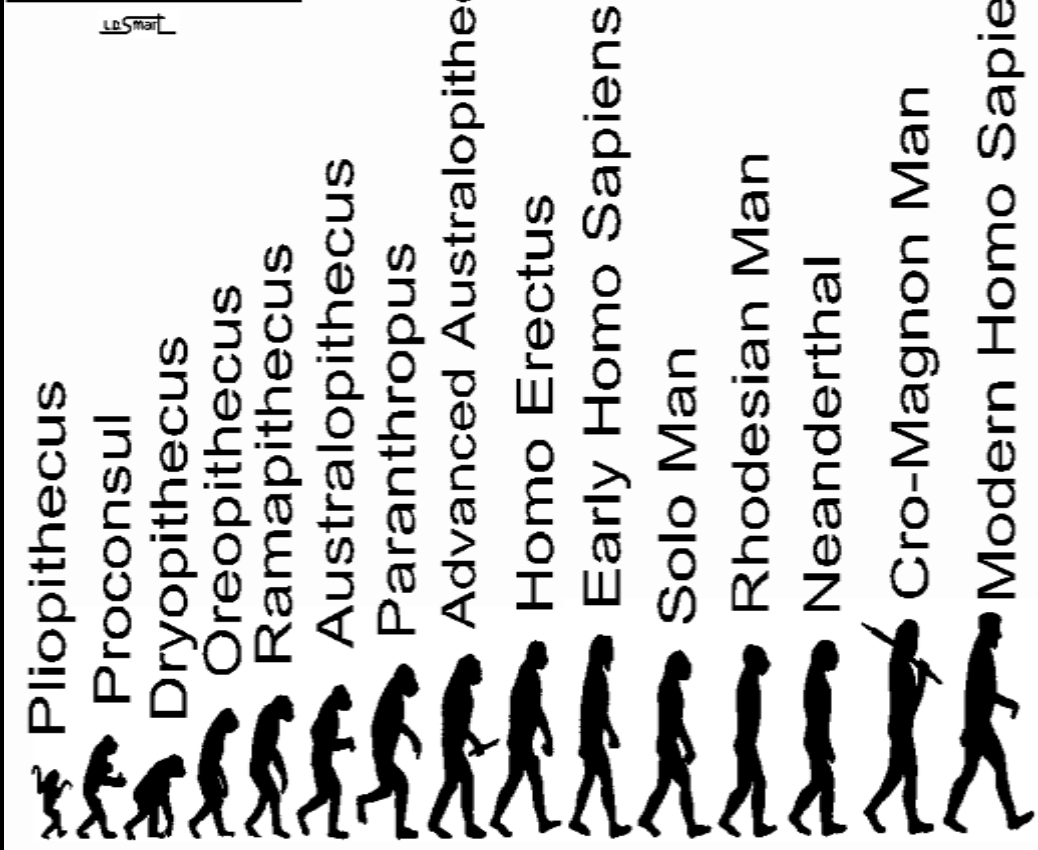




**Evolution from Hominids to Homo Sapiens:** About 4.5 mya, first possible human ancestor **Hominid** appeared and **Homo- Sapiens** appeared about 100,00 yrs ago. Human evolved over a long period time and developed more advanced brains, which allowed them to spread out in the world and adapt their environments to suit their needs. Hominid are a group that includes humans and their closest relatives. All walk upright on two feet. Humans are the only hominids that live today. Homo Sapiens originated and then dispersed from **Africa** 100,000 years ago. Homo sapiens migrated from Africa to various parts of Europe and Asia. Human evolution has been characterized by an increase in brain size and the ability for conceptual thought. Home Sapiens is still evolving.

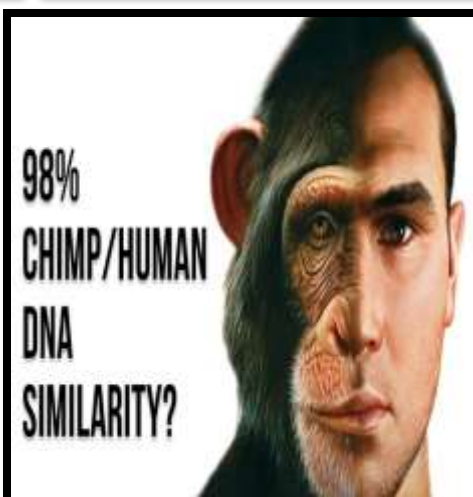
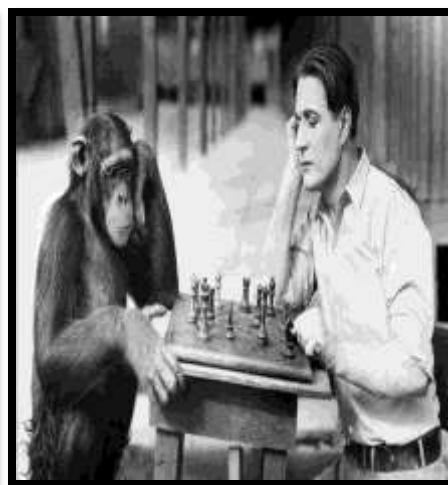


The Imaginative Road  
to Homo Sapiens



(after "Early Man", Life Nature Library, 1969 p.41-45)

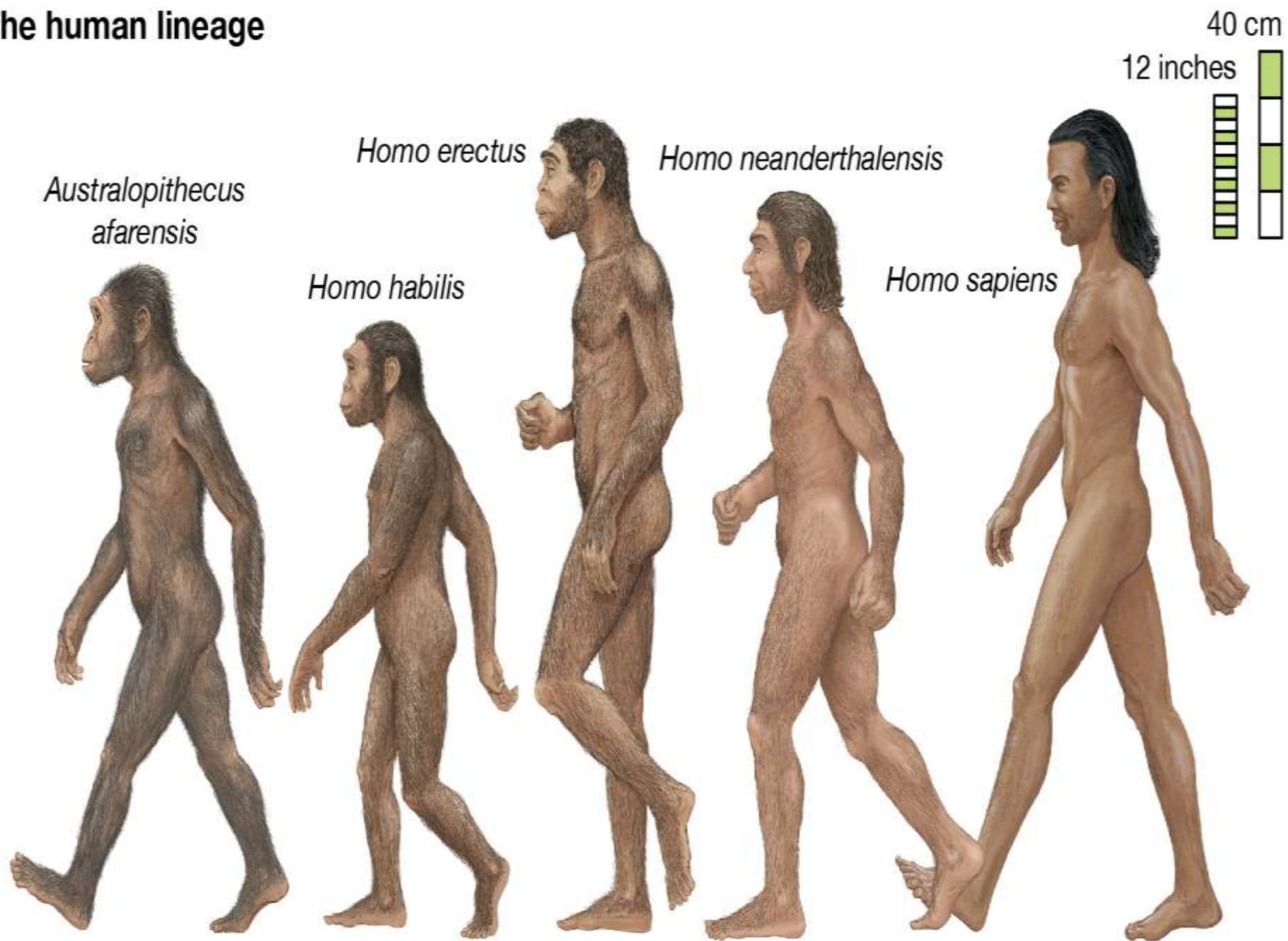
**Comparing Human and Chimpanzee.** If evolution is true then we might also expect that closely related organisms will be more similar to one another than more distantly related organisms. The skeleton of **humans and gorillas** are very Similar suggesting they shared a recent common ancestor, but very different from the more distantly related woodhouse, yet all have a common shared characteristic. Comparison of the human genetic code with that of other organisms show that Chimpanzees are nearly genetically identical and it is **similar of 98% but differ only by less than 2%** where as the mouse differs by **15%**. Human have 46(2x23) Chromosomes and Apes have 48(2x24) Chromosomes. Chromosome band between Human and Chimpanzee are **98%** same.



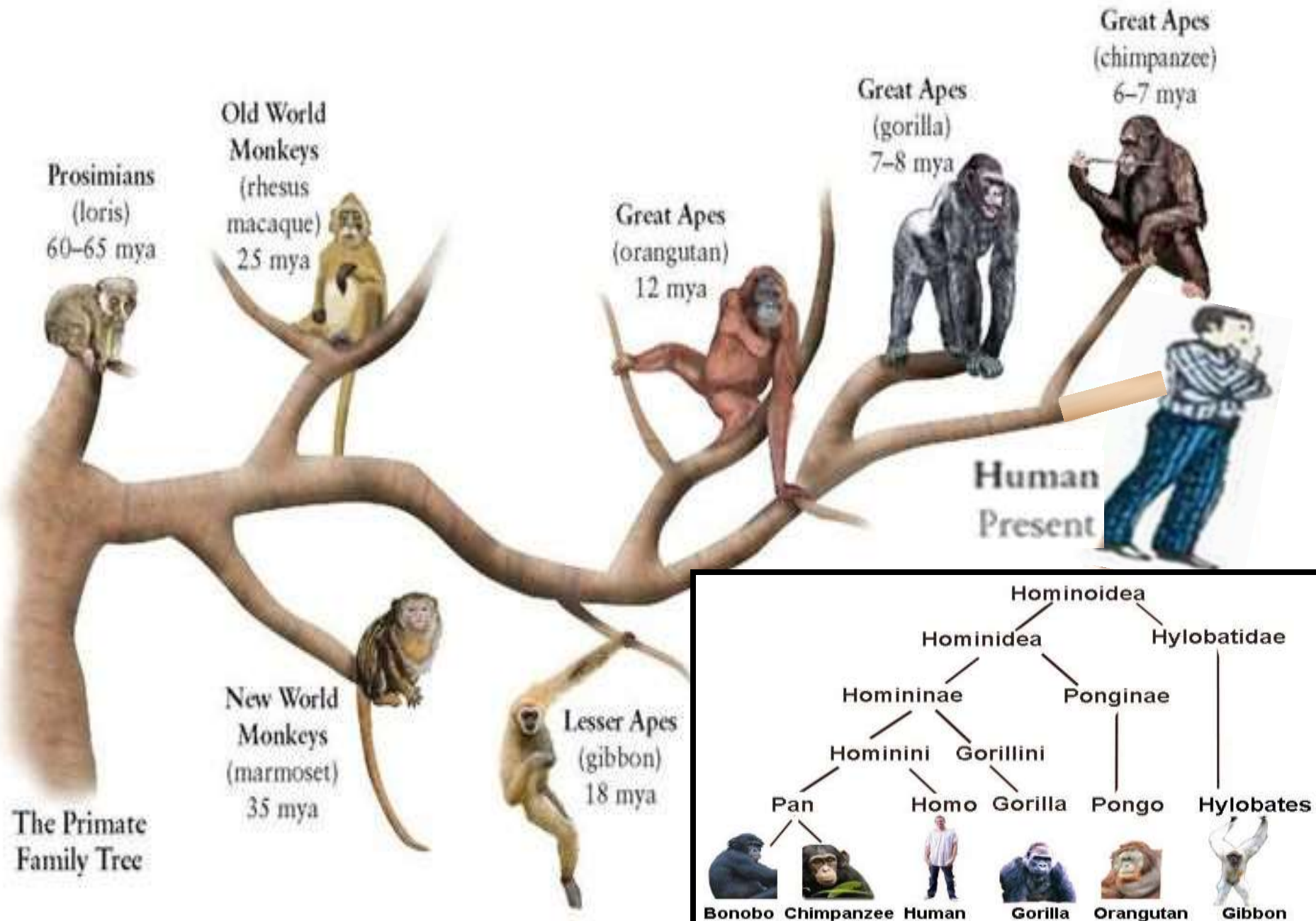
HUMAN	CCAAGGTCACGACTACTCC
CHIMPANZEE	CCAAGGTCACGACTACTCC
GORILLA	CCAAGGTCACACTACTCC



# The human lineage



# Evolution from Hominids to Homo Sapiens.





மனிதர்களுக்கும் மற்ற விலங்குகளுக்கும் உள்ள DNA மூலக்கூறுகளின் ஒற்றுமை விகிதம்

Fruit Fly  
**44%**



Mouse  
**92%**



**91%**

Yeast  
**26%**



**90%**

Plant  
**18%**



Chimp  
**98%**



**80%**



**87%**



**What percent  
of your genes  
do you share?**

# Five Mass Extinctions on Earth's History:

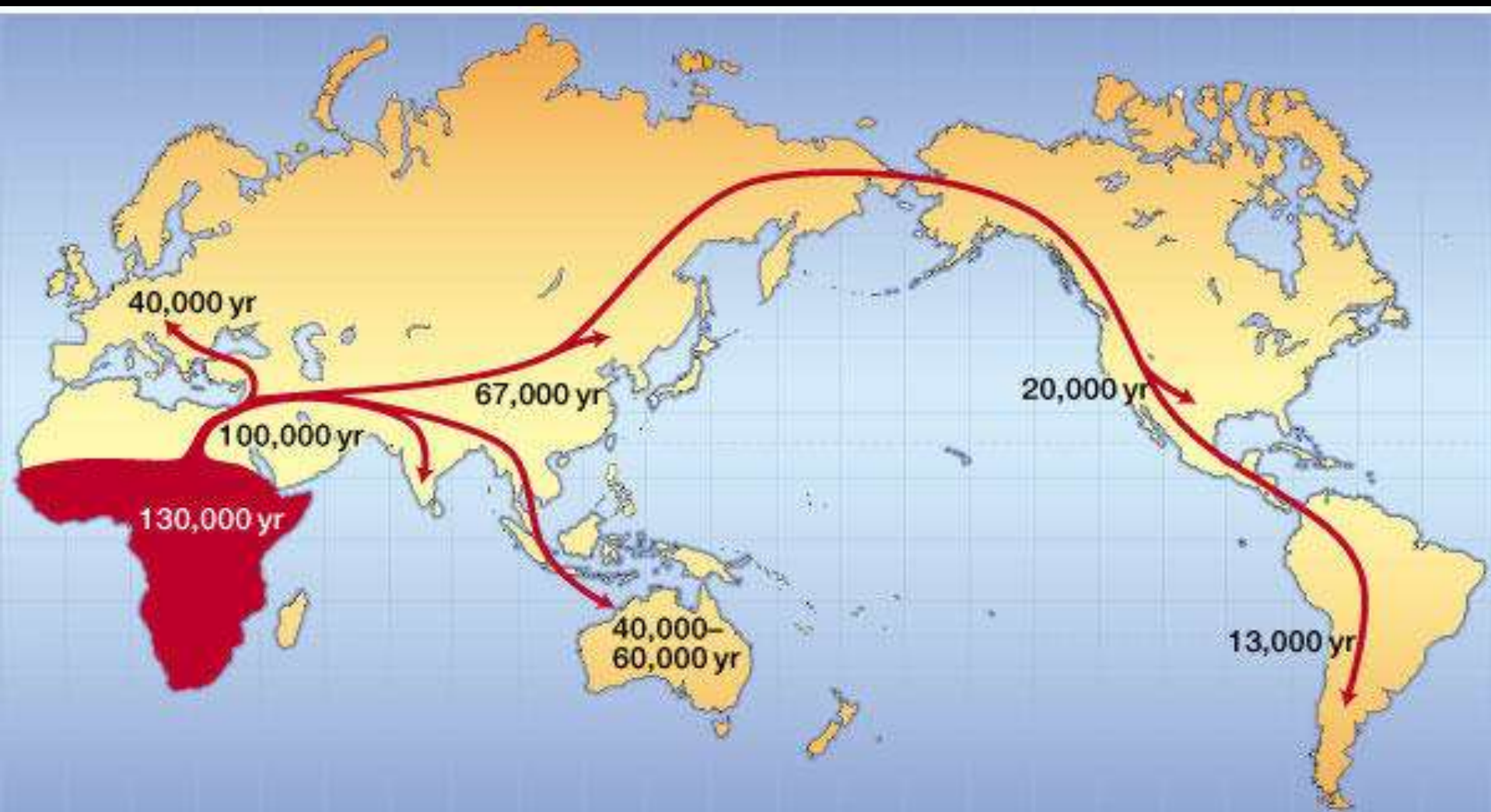


**Extinction.** In Biology, extinction is the termination of species. Extinction is a fact of Evolution. 30 Billion species are estimated to have lived since multi-cellular creatures first evolved in the Cambrian explosion and about 30 Million alive today, so 99.9% of all species that have ever lived are extinct.

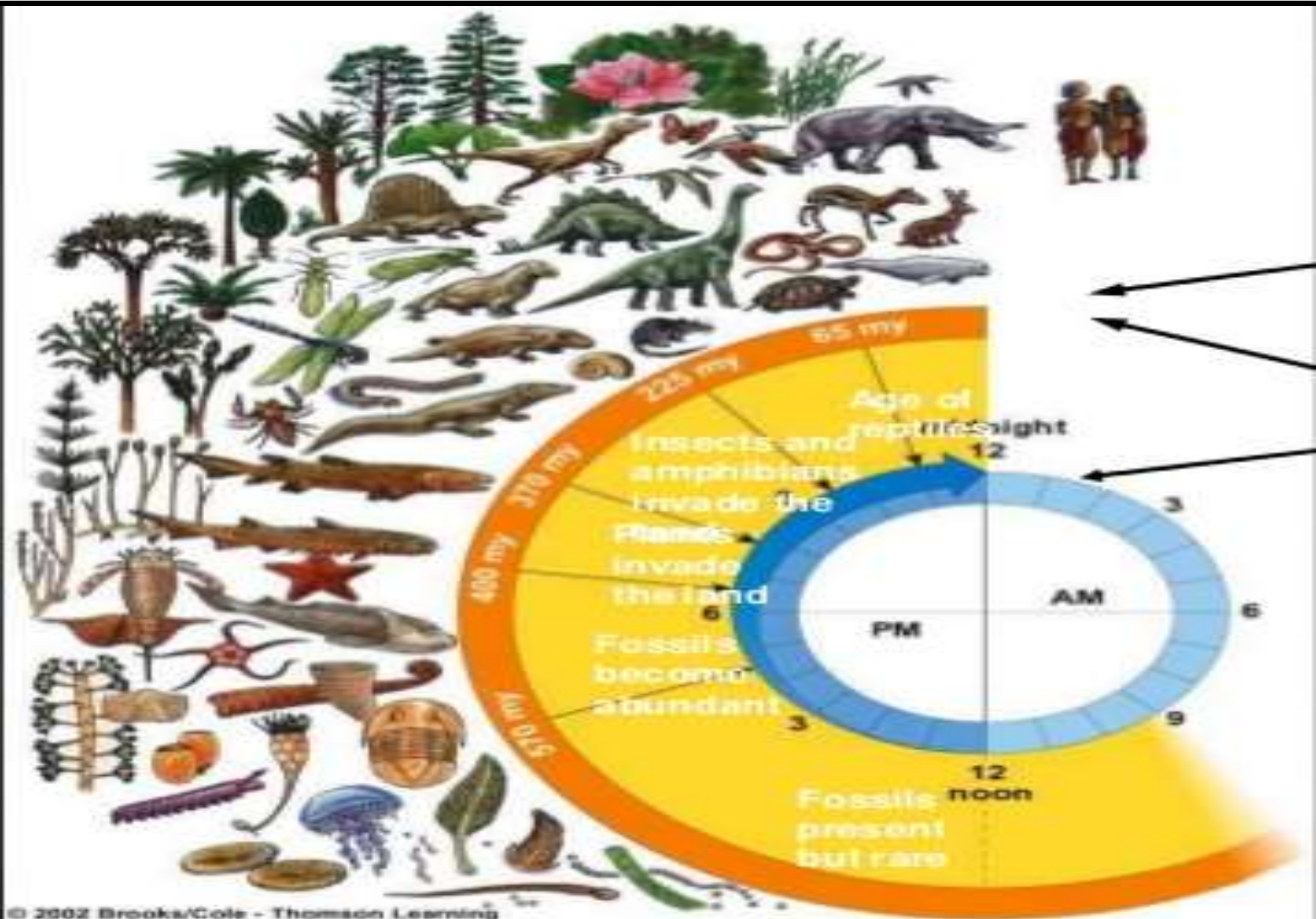
- **Five Major Extinctions.** Throughout history in the last 540 million years, there have been 5 mass extinctions. **1<sup>st</sup> Mass Extinction.** During Ordovician period(440mya) of Paleozoic era. The climate became so cold, 50% of animal species died. **2<sup>nd</sup> mass Extinction.** During Devonian(365mya) period of Paleozoic era. Caused by increase in water temperature, rise in carbon dioxide levels, and glaciations. **3<sup>rd</sup> Mass Extinction.** During Permian Period(250mya) of Paleozoic era. Caused by glaciations and volcanic activity that triggered sulphuric acid rain. This was the largest extinction, wiping out 96% of marine life and 75% of land species. **4<sup>th</sup> mass Extinction.** During Triassic period(215mya) of Mesozoic era. Caused by meteorite impact and Volcanic activity destroying 50% of fish and corals. **5<sup>th</sup> Mass Extinction.** During Cretaceous period(65mya) of Mesozoic era. Caused by meteorite impact in Mexico. This was the beginning of continental drift(Pangaea) and was responsible for the disappearance of the Dinosaurs.
- **Causes of Mass Extinction.** Environmental Changes, Global warming or cooling, Volcano, earthquakes, Natural disasters, Cataclysmic events. It is caused by the inability of the individuals to adapt to change(s) in their environment. Extinctions occur when environments change either gradually or suddenly.



**Out of Africa Theory:** First species of **Hominids** evolved in Africa around **2 mya**. Later, a descendent of **Homo Habilis**, **Homo Erectus** evolved along with other hominids, and spread out of Africa, made the leap to Asia and dispersed to all around the world. **Homo Erectus** ventured out of Africa and then evolved into modern man (**Homo Sapiens**) in several different locations through out the world around **100,000 yrs**. Modern humans of African origin completely replaced earlier populations in South Asia(India)

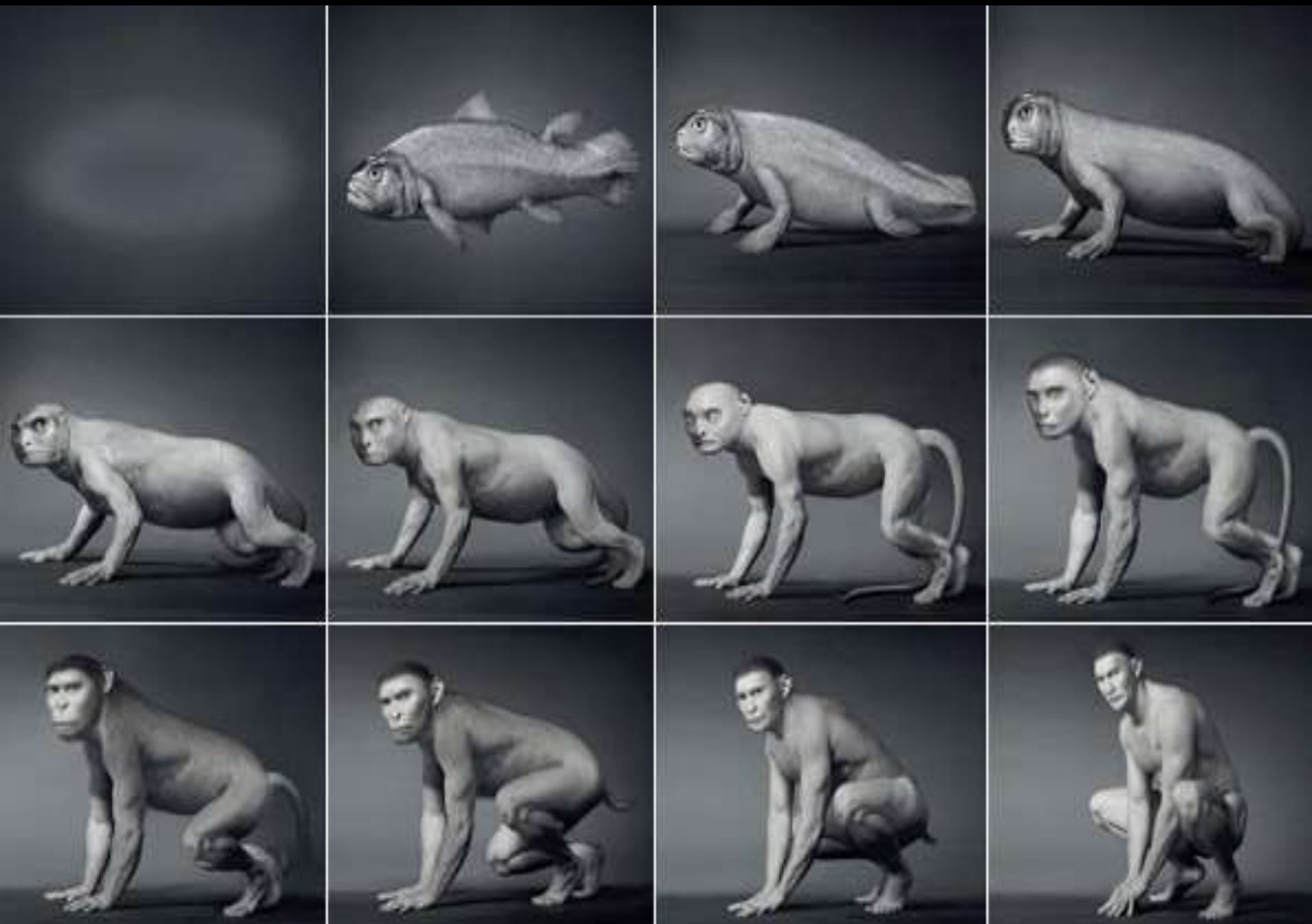


# The Modern Theory of the Descent of Man.

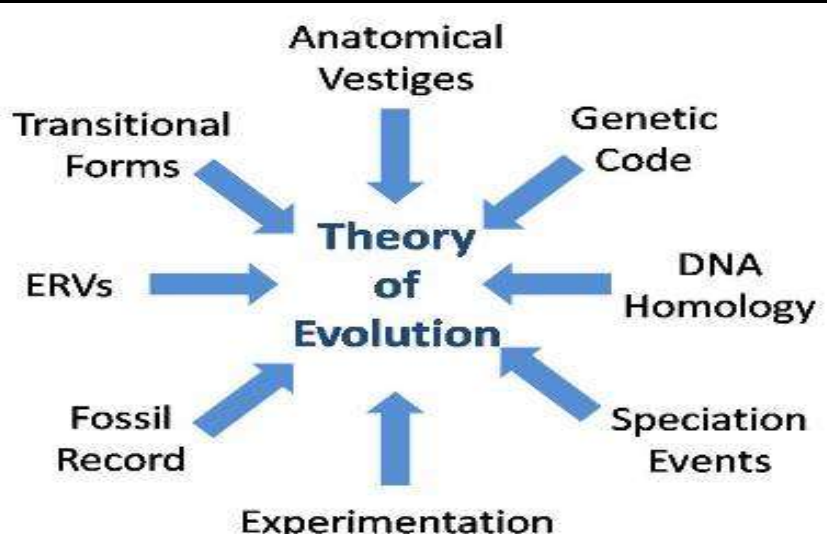




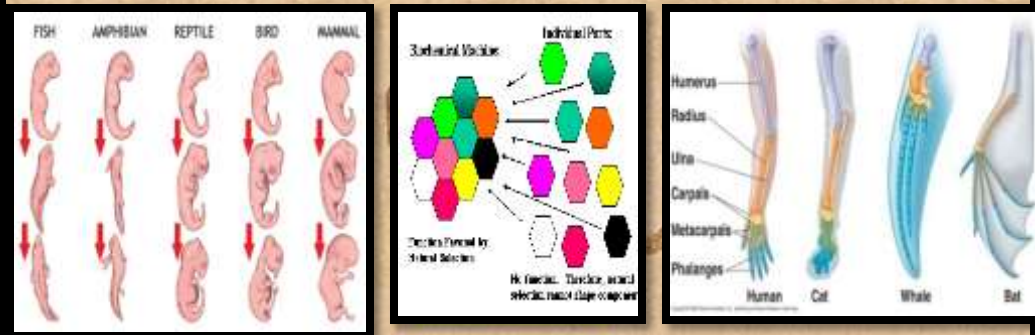
# Evolution from Fish to Human...



**Evidence for Evolution:** This theory supported by Scientific evidence by the Fossil records, Paleontology, Comparative Anatomy, Comparative Embryology(DNA/RNA/ATP), Biogeography, Molecular biology, and other fields has established evolution's truth beyond reasonable doubt. Most scientists agree that organisms have changed over a long period of time from **simple to complex**. The concept of the origin of life comes from non-living things.



## Sources of Evidence for Evolution



# Evidence for Evolution



## embryology

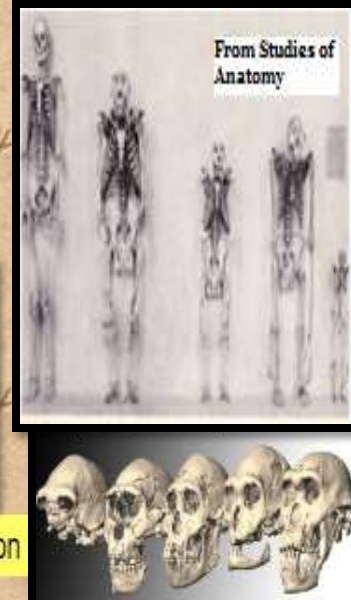


From the fossil record



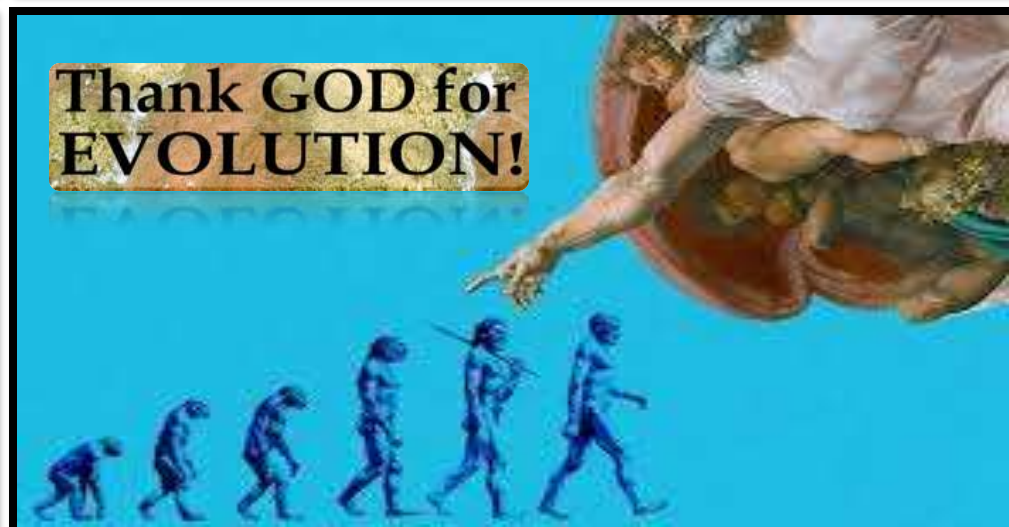
From studies of DNA

From Geographic distribution





# The Role of God in Human Life

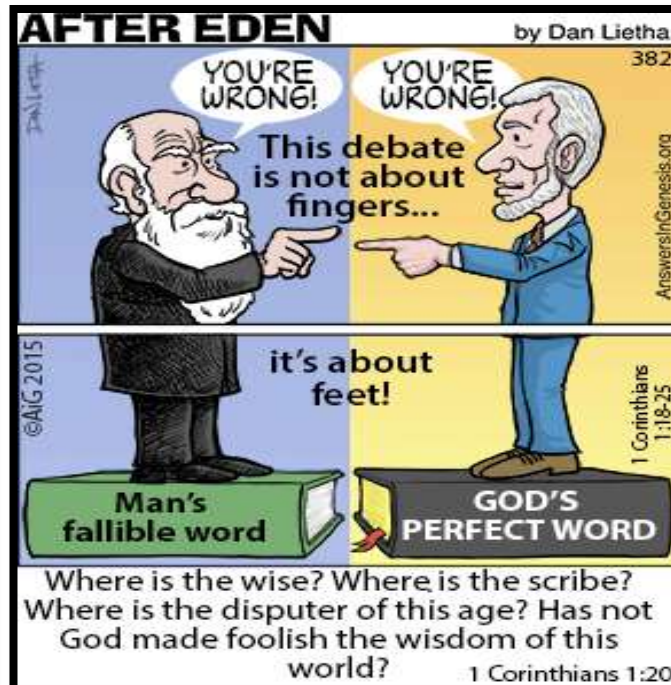
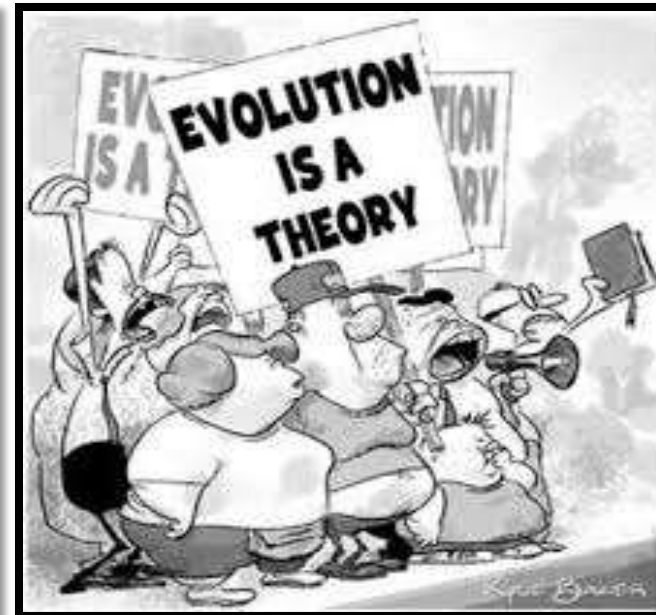
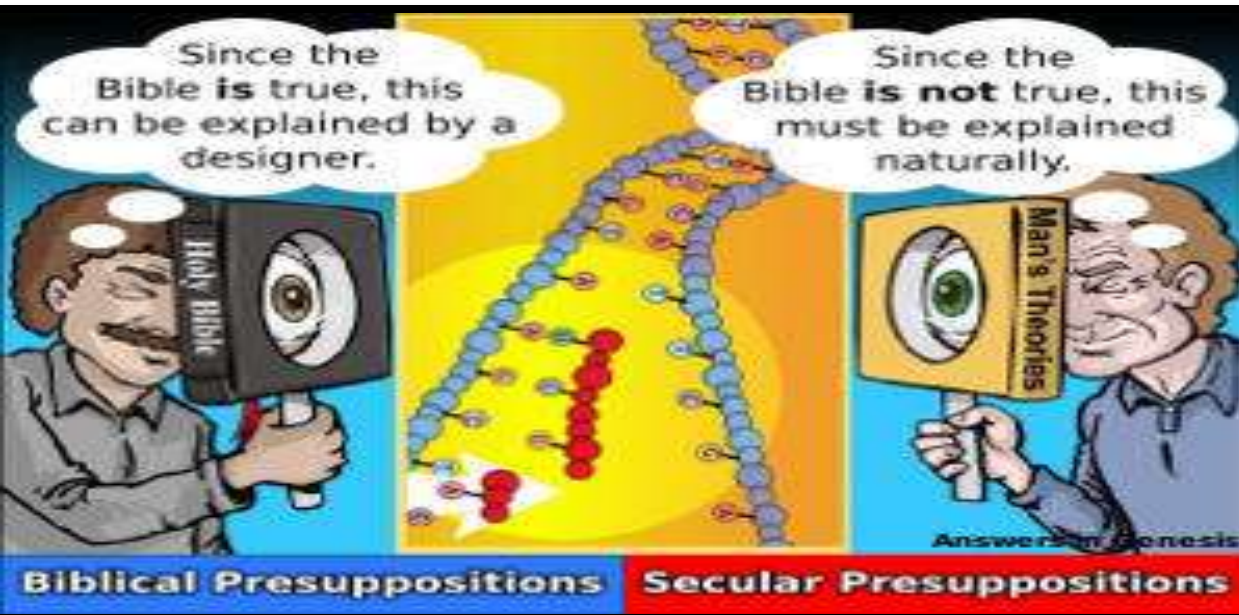


# Does the Bible Match with Evolution?

CREATION	EVOLUTION
light created before sun	no light before sun
oceans before land	land before oceans
first life was land plants	first life began in water
trees before fish	fish before trees
plants before sun	plants after sun
stars after earth	stars before earth
birds before reptiles	reptiles before birds
man from dust	man from previous animal
man before rain	rain before man
man before woman	woman before man

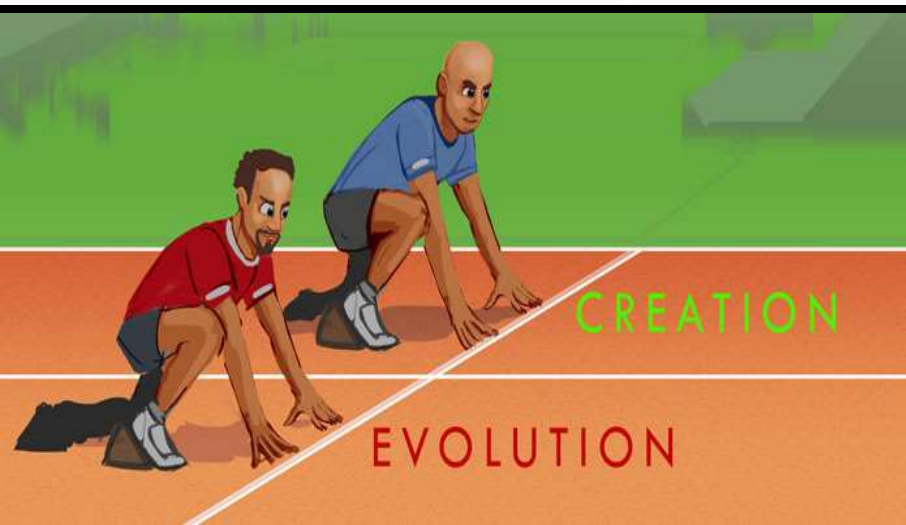
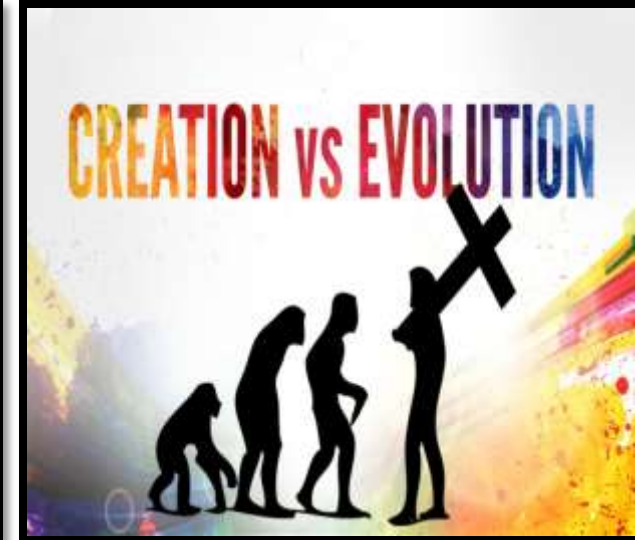
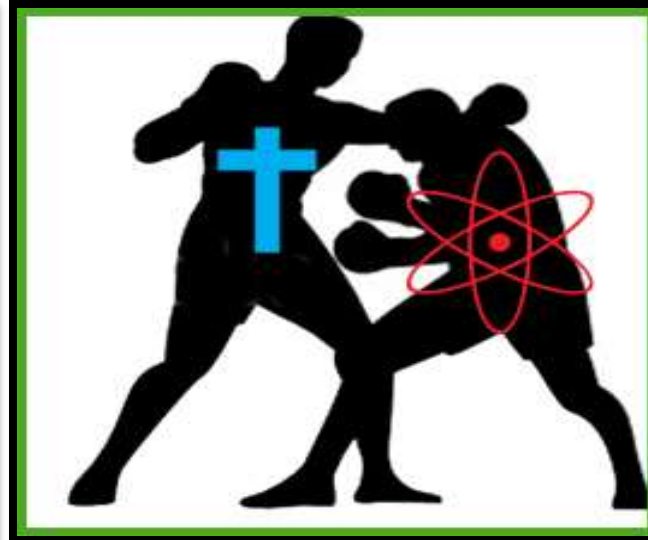
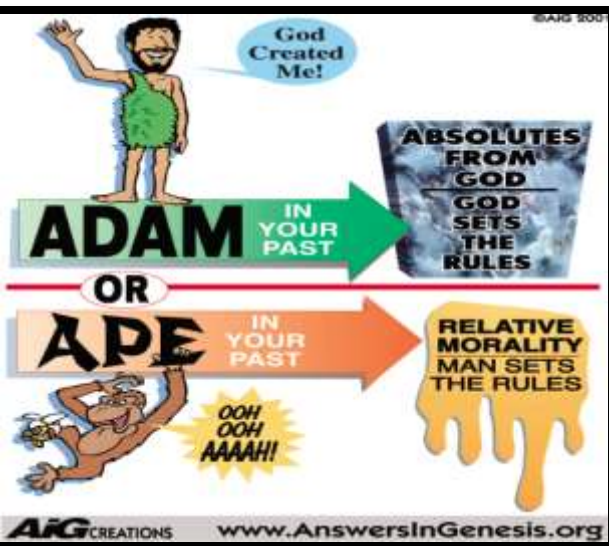


# Conflict between Creation (Bible) Vs Evolution (Science)

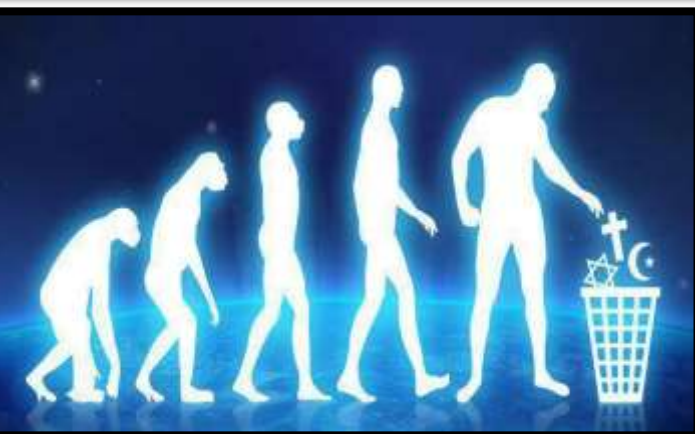
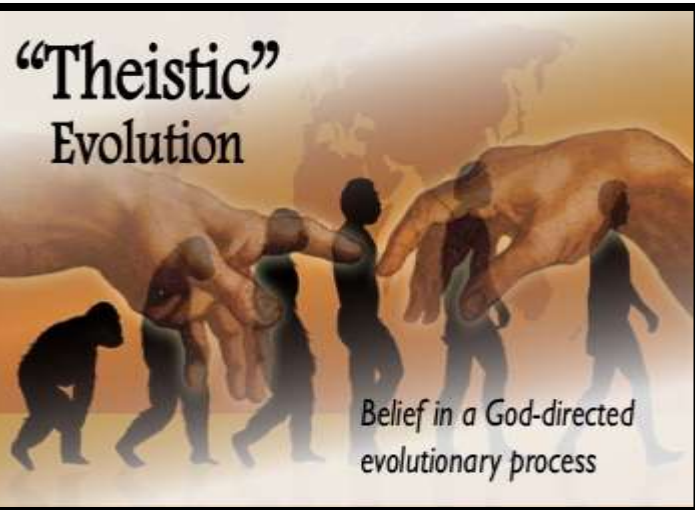




**Science Vs Religion.** The Bible teaches that God created all life on earth but Evolution teaches that life started by a purely natural process. The evidence of evolution reveals that the life evolved **4 bya** from a single cell. Once life arose and biological evolution got underway, no special supernatural intervention was required. The process of **random change** and **natural selection** resulted in the development of Earth's many diverse and complex species throughout long periods of time. Humans are a result of the biological evolution process and share a common ancestry with the great **apes**.





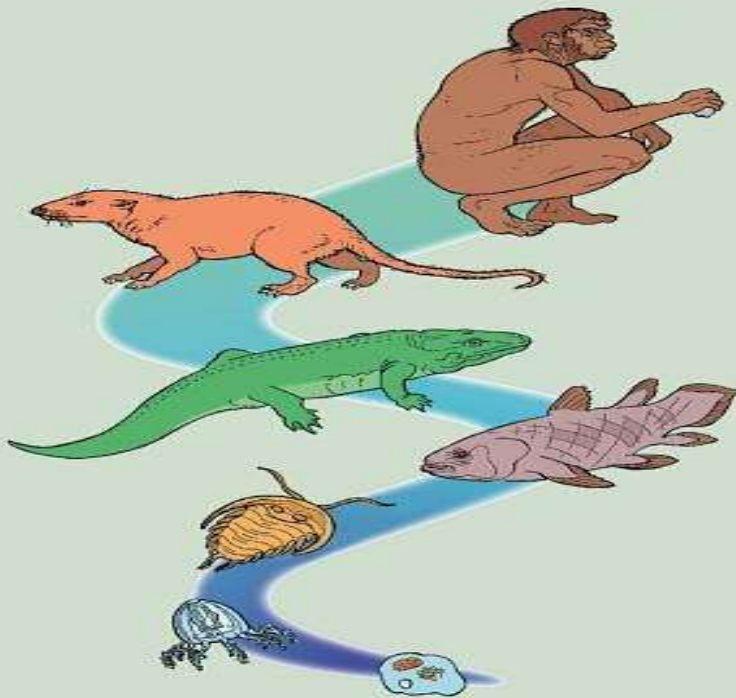


## Christian Response to Evolution:

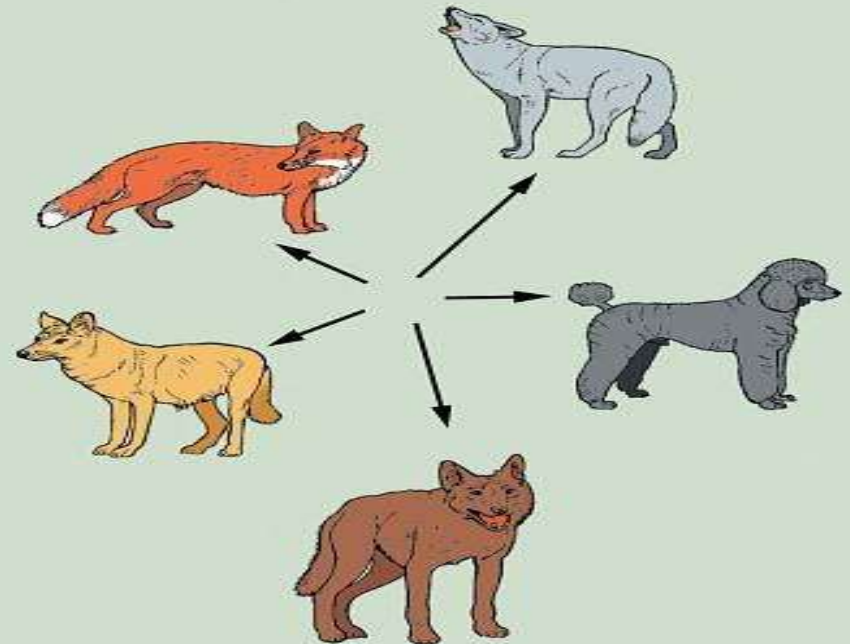
- **Creationists:** The Bible is literally true and Bible is right; so Science is wrong and the Evolution theories are rejected in favor of the Genesis account of creation.
- **Conservatives:** There is literal truth in the Bible, but this does not discount Scientific ideas; the Bible mentions "let there be light" and this could refer to the Big Bang and God allowed Evolution.
- **Theistic Evolutionists:** They attempts to **reconcile** the genesis account of creation to the theory of evolution. They believe that God created life by means of the evolutionary process. The Bible is full of **metaphorical language** and Genesis is a creation myth used to explain how God made the world. Science gives the accurate explanation, but doesn't discount the role of God in the Evolution.
- **Evolutionists:** God did nothing and there is no God. God is not required for the origin of Life. All things came to exist by **"natural Selection"** until the present. The physical universe and life were not created but happened by natural processes. The common descent of all life on earth from a single ancestor via undirected mutation and natural selection. Man is identical with Monkey, and both came form a common ancestors. Human beings are star dusts.

**What is Micro & Macro Evolution.** **Micro-Evolution.** It is science fact and observed and is not controversial. The species is not necessarily changed but small-scale changes in gene frequencies. The change from one variation within a species to another due to natural selection in response to environmental changes. **Ex. Dog.** Gen 1:11,21 "God created great sea-monsters and all the creatures that glide and teem in the waters in their kind of own species, and winged birds in their own species." **Macro-Evolution.** The change from one species to another through natural selection. This leads to biological Diversity, as new kinds of life started. **Ex. Monkey to Human.** It is long term, large scale evolutionary changes through which new species are formed. It has not been observed directly, since long periods of time are required for it to occur and **still remains a theory.**

## MACROEVOLUTION

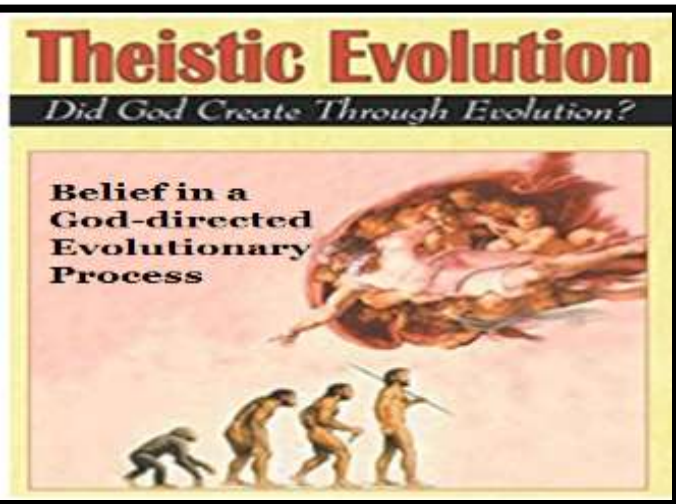


## MICROEVOLUTION



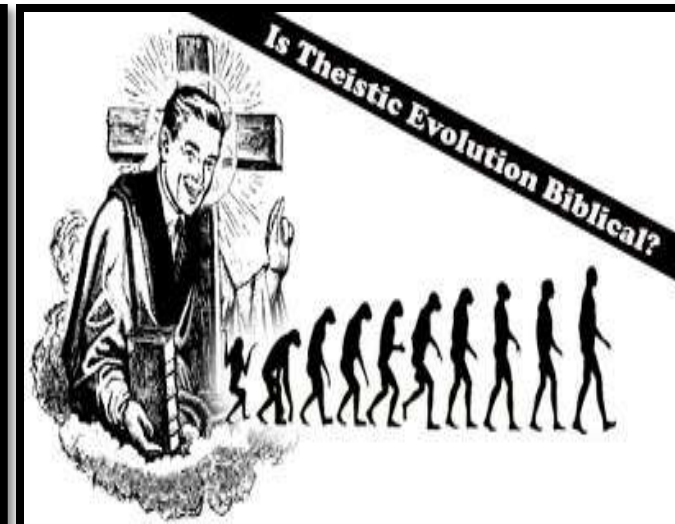
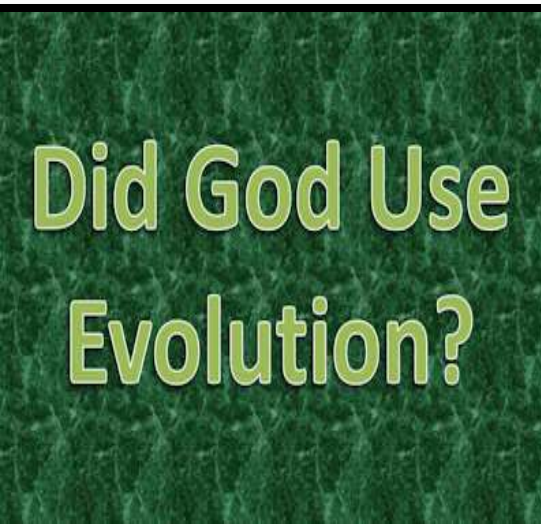
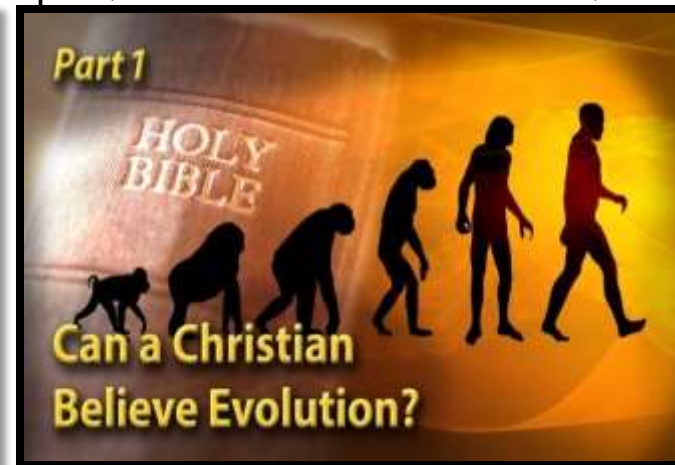
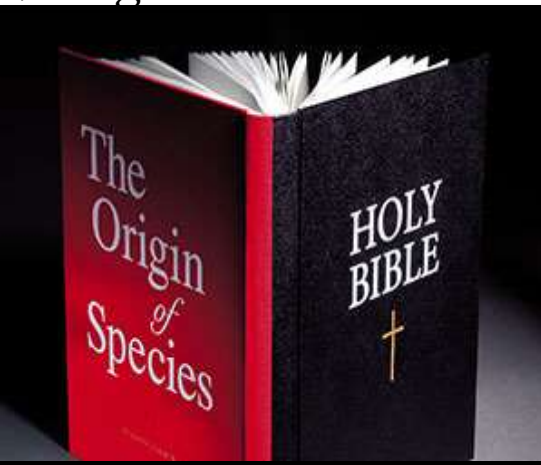


# Is Evolution Compatible with the Bible?



- **Theistic evolution**: It is the proposition that God is in charge of the biological process called evolution. It is not a theory in the scientific sense, but a view about how the science of evolution relates to some religious interpretations.
- **God and Evolution**: God used the process of evolution supernaturally intervening to guide and direct to create living things, including humans. God and creation are compatible with biological evolution. God intervened at various times in history to provide new life forms that would otherwise never have arisen. Evolution was the process God used; in fact there is no time for evolution without divine intervention. The belief that humans evolved to a particular stage and then a superior power changed the creatures into human being. **The first humans were a pair of highly evolved apelike creatures into who God placed souls.** Evolution was the process God used; in fact, there is no time for evolution without divine intervention. God was the one who punctuated the equilibrium. God simply lit the Big bang and let the laws of nature and evolution take their course. It accepts Micro-Evolution but rejects Macro-Evolution.
- **Creation is Metaphoric**: It claims Genesis creation account is not historical narrative, but is instead metaphoric. This view is accepted by R.C, and some Main-line Protestant Churches(Methodist, Lutheran, Presbyterian, Anglican, Unitarian, Baptist Churches, Congregationalist), and some Jewish Denominations.

Did God Used Evolution?: The Bible supports evolution also Evolution supports the Bible. In Gen 2:4, the story fits perfectly with scientific discovery. It supports Evolution; and God used Evolution to create. Here, God is not giving a literal time period but a figurative time period because he is speaking to primitive man. For the Lord, one day is like a thousand years and a thousand years like one day” 2 Peter 3:8. Adam and Eve are mentioned later and they produced two sons. Cain killed Abel and “Cain known his wife”(Gen 4;14-17). As well, we are told that there were other people alive during this time. The modern scientific understanding of biological evolution is considered to be compatible with the Bible.





Pope Francis responses to Evolution (2015): “The Big Bang, which today we hold to be the origin of the world, does not contradict the intervention of the divine creator but, rather, requires it”. “When we read about Creation in Genesis, we run the risk of imagining God was a magician, with a magic wand able to do everything. But that is not so”. Evolution in nature is not inconsistent with the notion of creation, because evolution requires the creation of Beings that evolve. The idea that natural selection on its own is insufficient to explain the complexity of the world. Evolution was “more than a hypothesis” and “effectively proven fact”.

# Christianity, Evolution & the Pope



**Bible and Interpretation:** Biblical passage should be interpreted in light of the rest of the Bible. Attention must be paid to the genre of the text: Poetry, Proverb, Narrative, history, epic, legend, anecdote, fable, myth. **The two Books of Revelation:** Bible is the book of God and Nature is the book of Science(Ps 19:1). Our interpretation is depend on our world-vies. We take our world-view to the fact and come up with a story about the fact. **Three rules of Interpretation:** 1). Context-Context-Context, 2). Let Scripture interpret Scripture, 3). Don't let our experiences interpret the Bible. **No conflict between Bible and Science.** Science is the Gift of God. Science is an equal partner with theology.

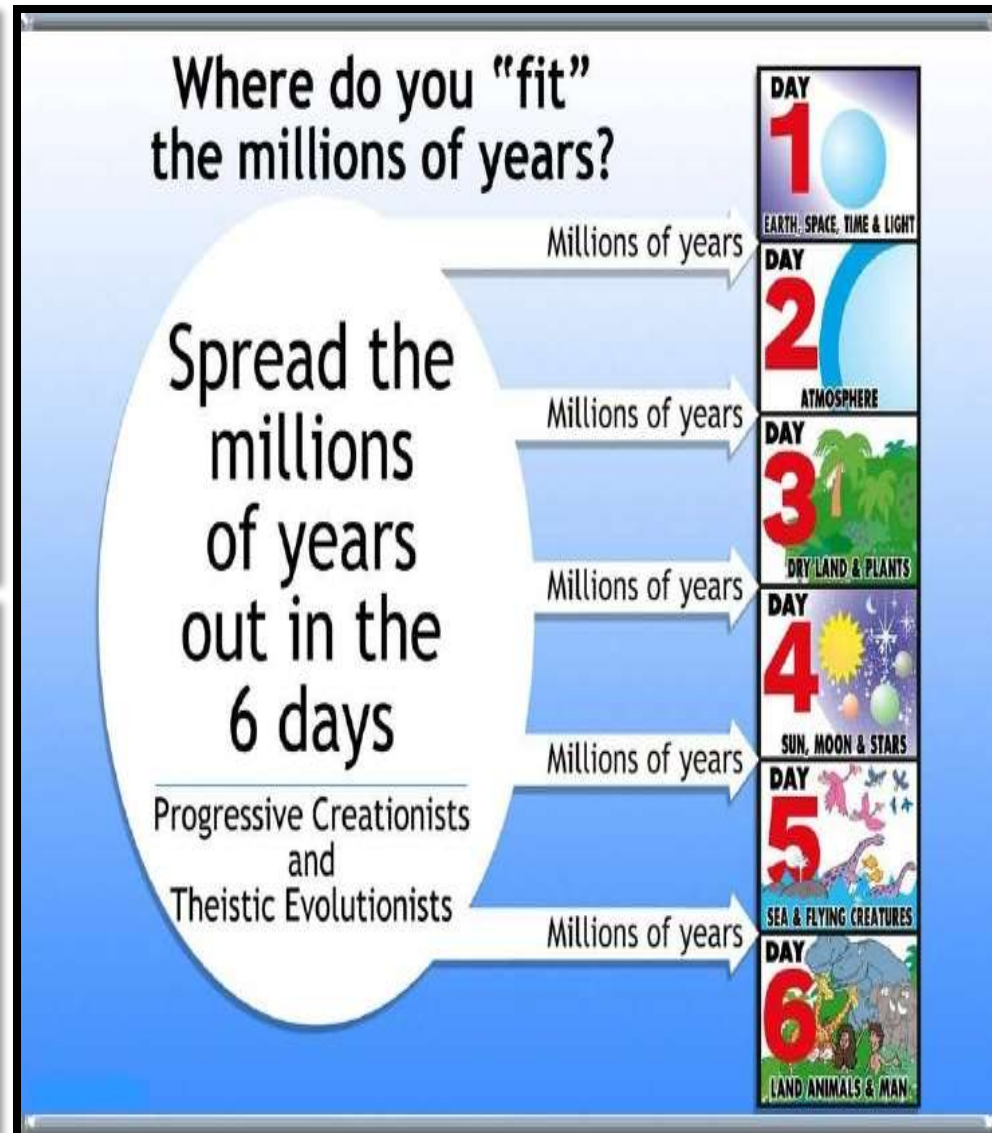
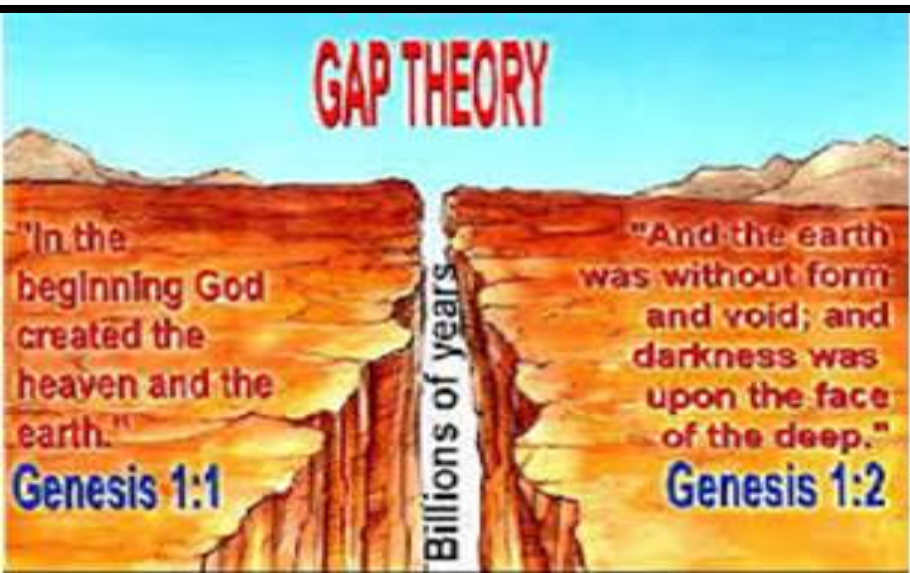
## HOW TO UNDERSTAND YOUR BIBLE



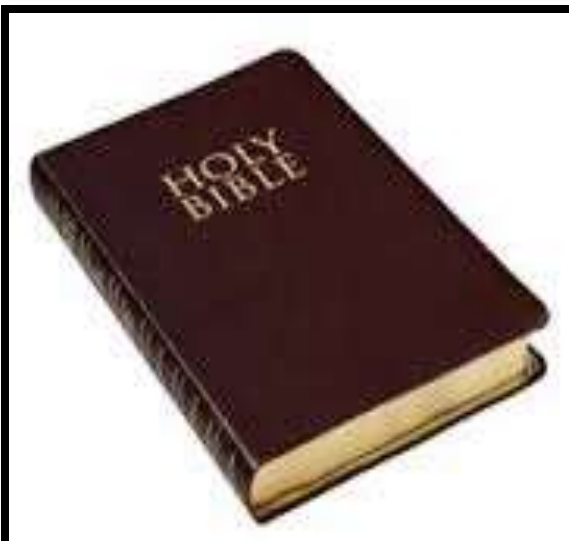
**The Origin of Life:** General Principles



**Gap Theory:** It is an attempt to reconciliation within the scientific support for Christianity. Gap of time between two distinct creations in the first and the second verses of Genesis(Gen 1,2), explaining many scientific observations, including the age of the earth. 2 Peter 3:8. Ps 90:4 God's time is not the same as our time. The **"Days"** are not to be taken literally. Each of the days of creation in Genesis represents a long ago.

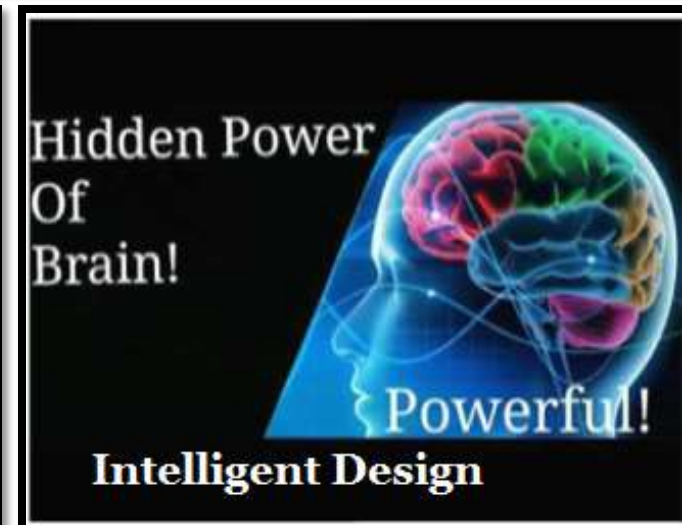
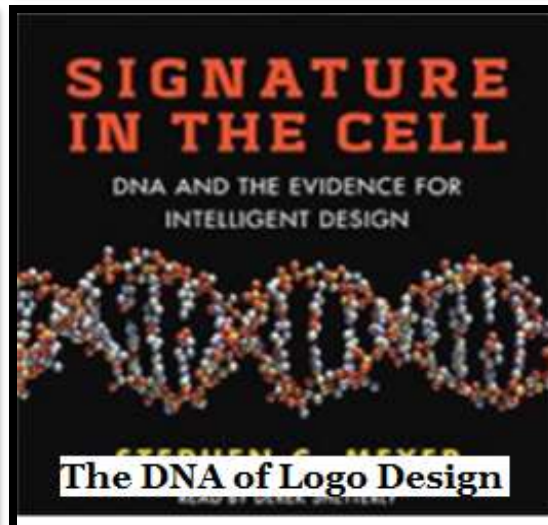
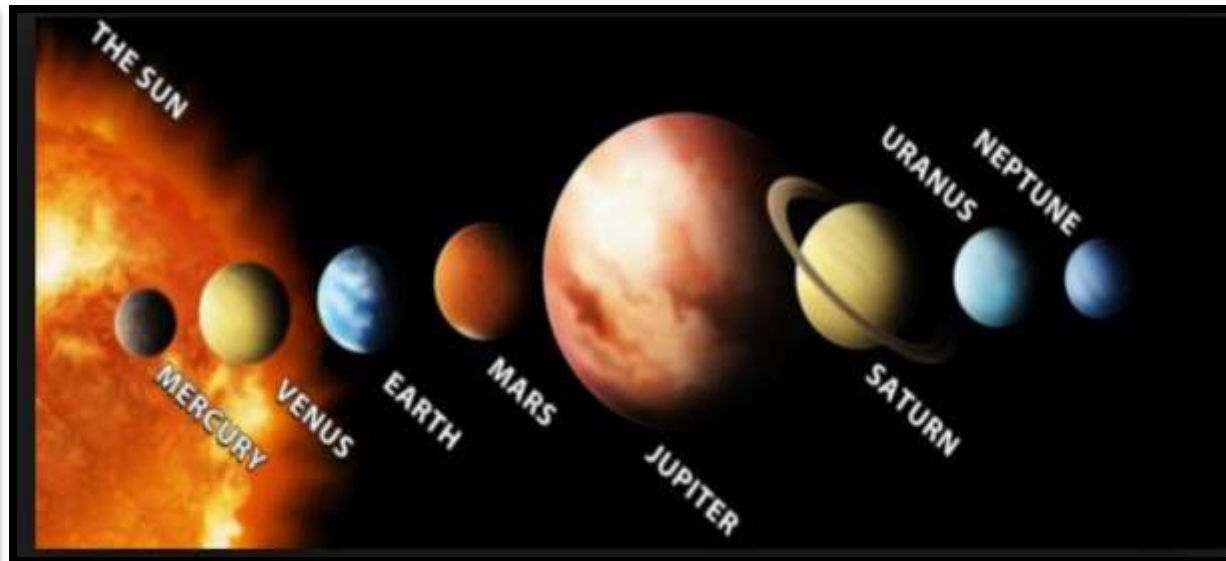


How to Interpret "Time" (Day) in Genesis (Day-Age Theory): In order to accommodate the Genesis record to the evolutionary scenario in theologically and scientifically. The issue of "time" and the word "day". It suggests that each day of creation was actually a longer period of time. The Days of Genesis 1 were not 24 hrs days, but rather long periods of time. A day can mean an "age/era/period of time". The seven-days creation is seems as a Poem not historical account because Sun, Moon, stars were not made till Fourth day.

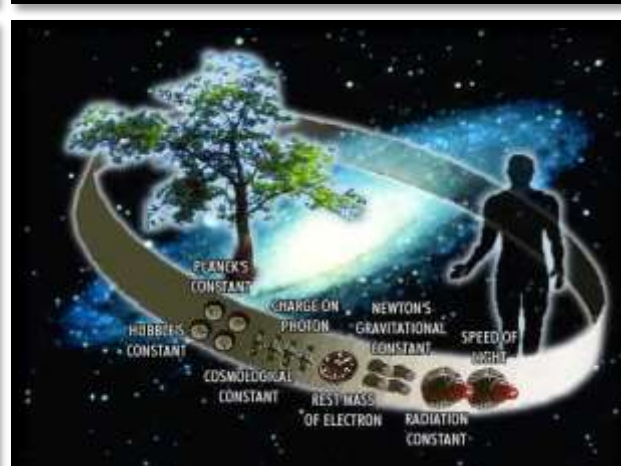
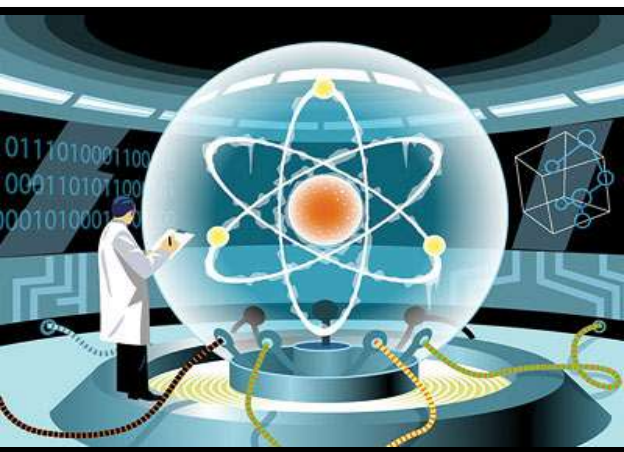




**Fine Turning or Intelligent Design:** The universe is fine-tuned for our existence. The whole universe seems to be balanced on a knife edge. A very slight change in any of most of the fine-tuned factors, and the universe instantly falls apart. If the physical laws of the universe were different there would be no life and no stars as we know them to provide energy to sustain human life. Certain features of the universe and of living things are best explained by an intelligent cause, not an undirected natural selection. The universe has an intelligent Designer (God) (Ps 8:3,4 & Ps 19:1)

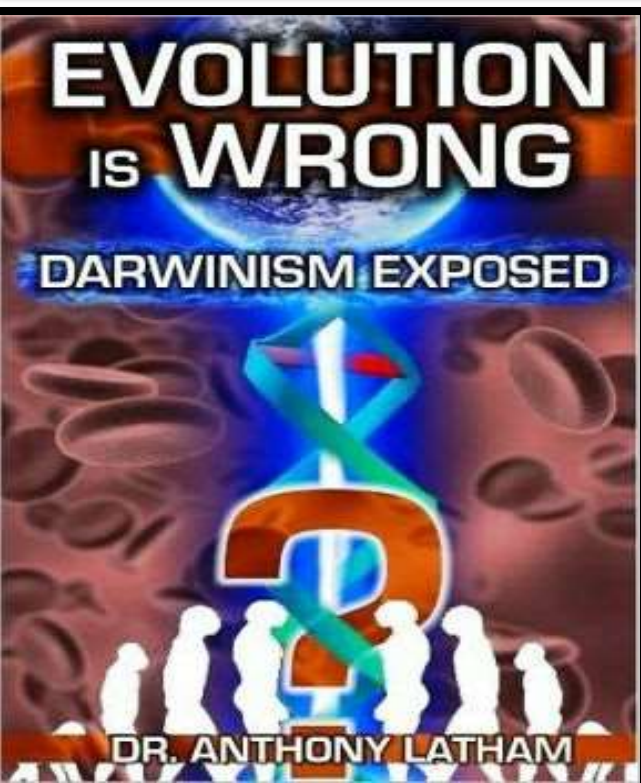
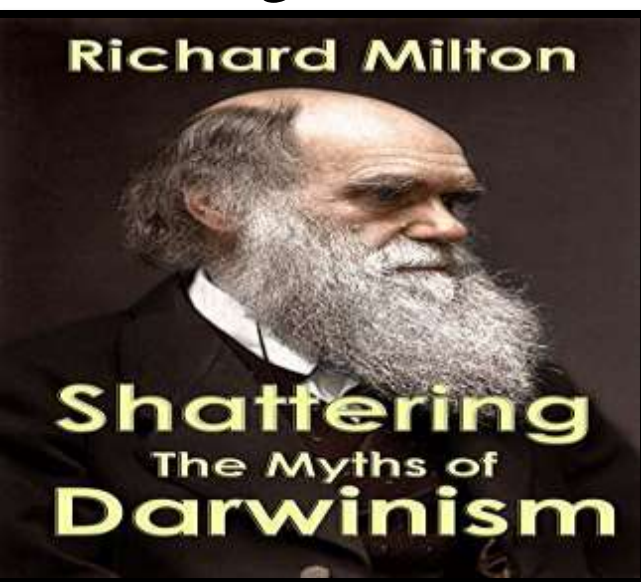


**Anthropic Principle:** In Greek *anthropos* means human. The Universe has been specifically designed from the beginning for human life to evolve. (supports both evolution and Design God). If the physical laws of the universe were different there would be no life. More than **66 parameters** make Earth able to sustain life(Ex: gravitational force, mass of proton, distance between Sun and Earth, Cosmological constants, atmosphere temperature & pressure, rate of universe expansion, free oxygen in atmosphere, adequate sunlight, absence of lethal radiation, relative strength of four fundamental forces, water properties, etc). Science itself has proven, as a hard fact, that this universe was made, was designed, for man(Ps 115:16) to live in and the universe has been “finely tuned”. Therefore God must exist. God is great (Gen 8:22).



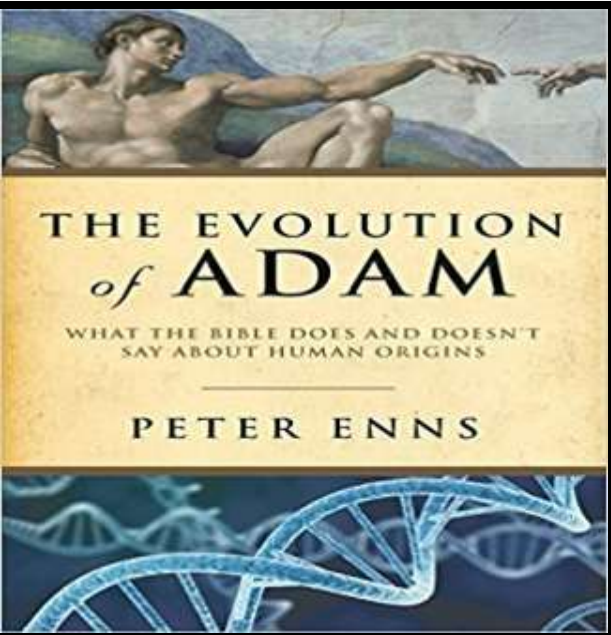
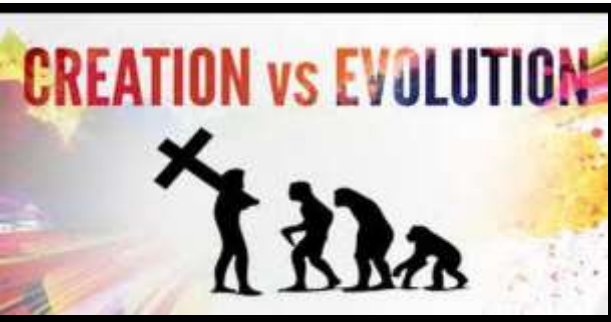


# Evidence against Evolution



- Limitation of Evolution: Evolution has gone opposite to the two laws of thermodynamics. 1<sup>st</sup> law of thermodynamics: The matter can convert into energy, the energy can convert into matter, everything in the Universe is made of matter and energy. You cannot create something out of nothing, you cannot go from nothing to suddenly the creation of matter and energy. 2<sup>nd</sup> Law of Thermodynamics: Everything in a closed system will tend toward a state of equilibrium. Entropy: Key principle, things will not increase in complexity and design, they will decrease, break down, physical law.
- Evolution is only just a Theory: It is not a fact or a scientific law. It is possible to disprove or falsify evolution in many ways. Evolution contradicts the proven Law of Cause & Effect, and the Law of Biogenesis (Life can come from Pre-existence life by Louis pasteur). Evolution explains the “How” but not the “Why”. The disagreements among even evolutionary biologists show how little solid science supports evolution. Evolution cannot explain how life first appeared on earth. Mutations are essential to evolution theory, but mutations can only eliminate traits. Natural selection might explain Micro-evolution but not Macro-Evolution. Evolutionists says that no purpose in life and no meaning in life and they cannot point to any transitional fossils (Monkey/Man, Dinosaur/Bird) and fossil records are incomplete. Nobody has ever seen a new species evolve. The only prudent conclusion is that they are the products of intelligent design, not evolution.

# Conclusion



- Compatible with Bible: Evolution is considered to be compatible with the Bible. In the past, many interpretations of the Bible were wrong, not because the scriptures were wrong, but because man tried to interpret the scriptures in the context of the accepted 'scientific' ideas of the day. The Bible is not a science book and it is not claimed to be scientific book, but Bible is the theological book. It is the word of God, written by fallible human. Bible talks about the redemptive work of God. Evolution does not take away or dismiss or deny God's creative act. You can believe evolution without compromising Scripture. Ps 19:1 says, Science (Book of Nature) explains the handy work of God.
- Creation is Metaphor: The author of Genesis did not write the creation account like historical narrative, rather a sermon that proclaims God as the creator and the creator cares for us. It is a beautiful metaphorical poem that God creating the world for humanity. It gives a meaning and purpose to life. The language is very poetic and very vague. In many places a literal understanding of Bible will not work.
- God's Truth: The truth of the theory is scientific question, not a theological one. It is possible that God used the process of natural selection (Evolution) to bring life upon the earth. God's creative works takes place within the natural order through the laws of nature using the mechanism the science has uncovers. If we believe God is the creator; then we believe all truth originate from God including scientific truth. God and Science are not enemy, because **in the end ,if it is true; it is of God.**



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THE END.



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God Bless You to Bless Others...